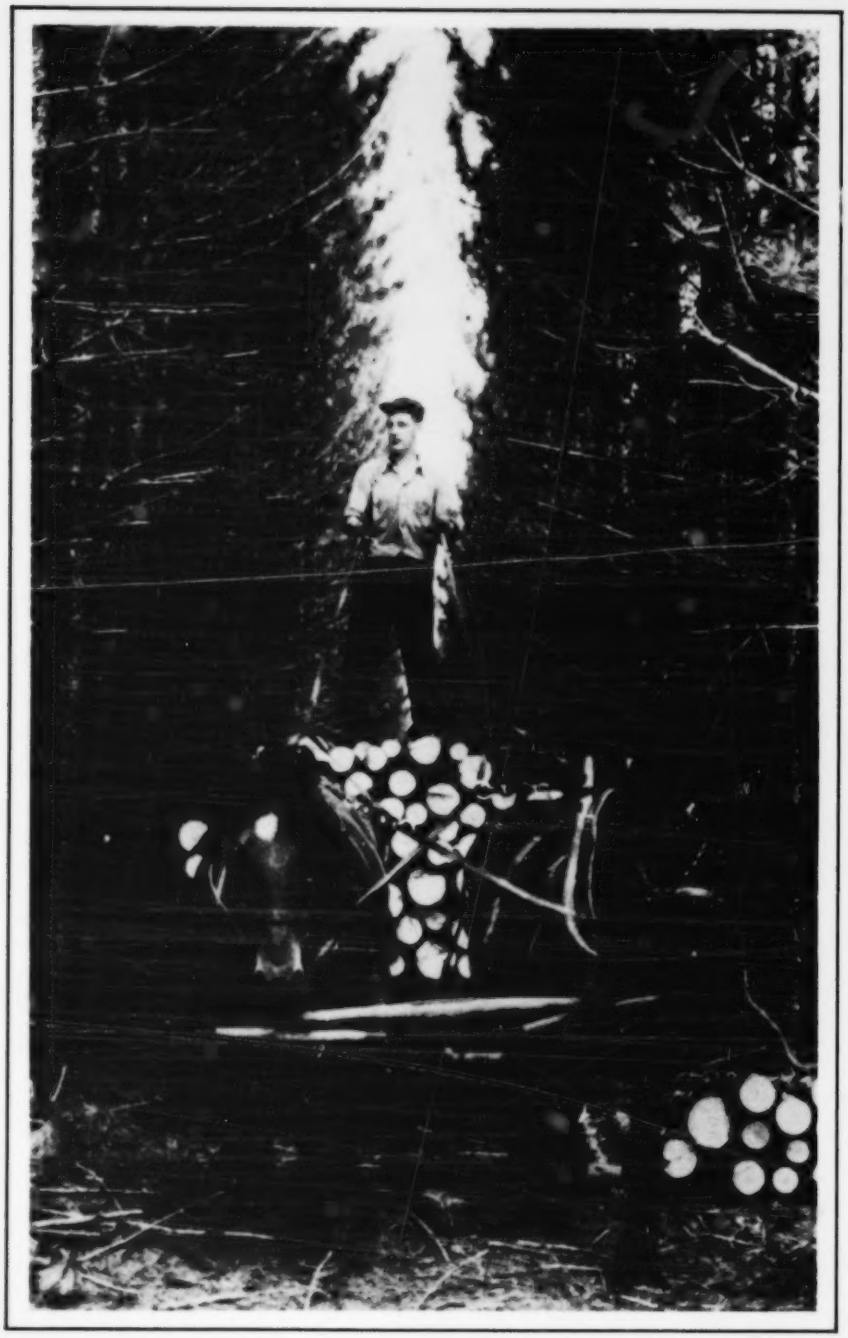
Forest Research Report No. 108

Red Pine Plantation Growth and Yield Tables



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Forest Research Report No. 108

104-06684/

Red Pine Plantation Growth and Yield Tables

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Heavily thinned stand in Vivian Forest red pine plantation, York County. This plot was first thinned at 23 years of age and has received 7 thinnings in total up to the present age of 59 years. The basal area has been maintained at about 30 m^2/ha. The plot presently has an average diameter of 32 cm. A 14 m pole could now be cut from every tree on this plot (405 trees/ha). (Left to right: Al Beckwith, Pete Roebbelen, Vic Smith)

Control plot in Vivian Forest red pine plantation, York County. This plot suffered light wind damage at age 34, but has received no thinnings. The plot presently has a basal area of 44 m^2/ha and an average diameter of 20 cm. At 59 years this stand is still suitable only for pulpwood. (Left to right: Vic Smith, Pete Roebbelen, Al Beckwith)

ABSTRACT

BECKWITH, A.F., P. ROEBBELEN and V.G. SMITH. 1983. Red pine plantation growth and yield tables. Ont. Min. Natur. Resources, Forest Res. Br., Forest Res. Rep. No. 108. 70 p.

*A number of tables relating to the growth and yield of planted red pine (***Pinus resinosa** *Ait.) are presented. The main table projects yields five years after various thinning intensities for a range of sites and ages. The five year projection can be repeated up to a stand age of 65, enabling the forest manager to design thinning strategies to meet a number of different objectives. Other tables include present yield, normal yields of unthinned stands, individual tree volume and site index.*

The tables are a result of over 30 years of remeasurements on permanent sample plots in Ontario (site regions 5E and 6E).

The data are presented both in SI and Imperial units.

BECKWITH, A.F., P. ROEBBELEN and V.G. SMITH. 1983. Tables de rendement et de croissance du pin rouge en plantation. Ont. Min. Natur. Resources, Forest Res. Br., Forest Res. Rep. No. 108. 70 p.

*Un nombre de tables relatives à la croissance et au rendement du pin rouge (***Pinus resinosa** *Ait.) en plantation sont présentées. La table principale montre les rendements cinq ans après diverses intensités d'éclaircie pour des intervalles de sites et d'ages. La projection quinquennale peut être répétée jusqu'à un âge de peuplement 65, permettant à l'aménagiste forestier de choisir des stratégies d'éclaircie afin de rencontrer un nombre d'objectifs différents. D'autres tables contiennent le rendement actuel, le rendement normal de peuplements non-éclaircis, le volume d'arbre individuel et l'index de site.*

Les tables sont un résultat de plus de 30 années de remesurage sur des places-échantillons permanentes en Ontario (régions de site 5E et 6E).

Les données sont à la fois présentées et SI et en unités impériales.

Photographs on opposite page by Miss Jean Robinson, Photographer, Ontario Tree Improvement and Forest Biomass Institute. (March, 1983)

INTRODUCTION

Widespread planting of red pine (*Pinus resinosa* Ait.) commenced in Ontario during the 1920's. Since then the management of red pine has been a major concern of foresters in southern Ontario. In the 1930's and 1940's several silvicultural study plots and other permanent inventory plots were established in red pine plantations in Ontario. This trend has continued to the present. It is only recently that a sufficient number of the oldest of these plantations has passed the convenient site index age of 50 years. This report brings together data from many of these plots in a more comprehensive treatment of red pine growth and yield than has been possible in the past. It is an extension of Beckwith and McNeice's (1978) growth tables, incorporating significantly more data, both in terms of new plots and in terms of remeasurements of the original plots.

Forest management decision-making requires that future growth and yield be estimated accurately, particularly where there may be a choice of end product. For example, a manager may wish merely to maximize total volume, regardless of stem size, or may wish to produce the greatest number of a specific product such as poles, or be interested in growing trees of the highest possible lumber quality. For these objectives the manager has available a variety of alternative thinning schedules. By knowing the consequence of each alternative the manager can select and realize a specific objective. Practical guidelines become more important as the number of options in a management situation increases. The growth and yield tables presented here can be used to forecast the outcome of various thinning regimes. Thus, foresters can design thinning schedules to meet desired objectives.

The tables refer to 20-to 60-year old plantations with initial spacings of 1.7 m x 1.7 m to 2.3 m x 2.3 m in site regions 5E and 6E (Hills 1961).

There are five types of table, giving information on (i) present yield, (ii) normal yield of unthinned stands, (iii) projected yields after thinning, (iv) individual tree volume, and (v) site index. The tables are given in SI units in the main body of the report and in Imperial units as an appendix. Prior to each table in the body of the report, the characteristics and recommended uses of each are discussed. In a separate appendix, the data source and analysis for each table are presented.

DESCRIPTION AND USE OF TABLES

Present Yield (Table 1)

This table gives present stand volume for either thinned or unthinned plantations. The table estimates gross total underbark volume (m^3) (including stump and top) of all trees on a per hectare basis. It is to be applied when the stand basal area (m^2/ha) and the stand dominant height (m) can be determined in the field.

The following steps are required to estimate the present yield of a plantation as given in Table 1:

1. The stand basal area (m^2/ha) must be determined. This is the cumulative cross-sectional area of all tree stems (inclusive of bark) at breast height on a hectare of land. Stand basal area may be measured with a wedge prism (e.g. Basal Area Factor of 2 or 1) or by diameter tallies on fixed sample plots that are 0.04 ha or greater.
2. An estimate of the stand dominant height (mean height (m) of dominant and codominant trees) must be calculated. This may be done by averaging the total heights of a small sample (10-15 trees) of subjectively chosen dominant and codominant trees.
3. Enter Table 1 at the closest basal area and height values and interpolate to determine the gross total underbark volume (m^3/ha).

As a rule of thumb one can obtain approximate values from the following equation:

Gross total volume = 0.45 x Basal area x Dominant height

TABLE 1 Present yields for red pine plantations

Stand dominant height (m)	Gross total volume (m^3/ha)											
	Basal area (m^2/ha)											
	15	20	25	30	35	40	45	50	55	60	65	70
8	51	70	89	108	127	146	165	184	203	222	241	260
10	65	89	113	136	160	184	208	231	255	279	302	326
12	79	108	136	165	193	222	250	279	307	336	364	393
14	94	127	160	193	227	260	293	326	359	393	426	459
16	108	146	184	222	260	298	336	374	412	450	487	525
18	122	165	208	250	293	336	378	421	464	506	549	592
20	136	184	231	279	326	374	421	468	516	563	611	658
22	151	203	255	307	359	412	464	516	568	620	673	725
24	165	222	279	336	393	450	506	563	620	677	734	791
26	179	241	302	364	426	487	549	611	673	734	796	858

Normal Yield for Unthinned Stands (Table 2)

Table 2 is intended for use in red pine plantation stands where the present basal area has not been measured, but the age and site index are known. It may be used to predict the future yield, number of stems, basal area, mean diameter or dominant height of stands that have not been subjected to thinnings and to compare these yields with those obtained after thinning (Table 3). If basal area is known, estimates for unthinned stands may be made by using Table 3.

Stocking levels may be determined by expressing the measured basal area of a thinned or unthinned stand as a percent of the basal area value found in this table.

Growth estimates for 5-year intervals are found by taking differences between successive age cells in Table 2.

The following steps are required to estimate the parameters of a red pine plantation given in Table 2:

1. The age of the stand must be determined. All stand ages presented in this report refer to the number of growing seasons since the plantation was established. The stand age may be obtained from plantation records, or by directly aging several trees within the plantation. This can be accomplished by counting branch internodes along the stem, or by counting annual rings at stump height.
2. An estimate of the site index of the stand must be calculated. This can be achieved by determining the stand dominant height and then using the site index table (Table 5) in this report.
3. Enter Table 2 with the proper age and site index values and interpolate the results from the figures presented.

TABLE 2 Normal yields for unthinned red pine plantations

Age (years)		Site index[a] 16	18	20	22	24	26
20	stems/ha	2776	2817	3023	3243	3402	3474
	ba (m^2/ha)	18.9	24.6	28.2	33.0	37.6	40.6
	mean dbhob (cm)	9.3	10.5	10.9	11.4	11.9	12.2
	vol (m^3/ha)	54	81	105	137	172	202
	dom. height (m)	7	7	8	9	10	11
25	stems/ha	2580	2569	2704	2846	2929	2934
	ba (m^2/ha)	29.3	33.1	35.8	39.7	43.5	46.1
	mean dbhob (cm)	12.0	12.8	13.0	13.3	13.8	14.1
	vol (m^3/ha)	109	140	169	208	250	288
	dom. height (m)	8	9	10	11	12	13
30	stems/ha	2430	2382	2469	2558	2592	2556
	ba (m^2/ha)	36.0	39.1	41.3	44.6	48.0	50.3
	mean dbhob (cm)	13.7	14.5	14.6	14.9	15.4	15.8
	vol (m^3/ha)	162	200	235	281	330	376
	dom. height (m)	10	11	12	14	15	16
35	stems/ha	2310	2235	2286	2337	2337	2275
	ba (m^2/ha)	41.0	43.7	45.6	48.5	51.5	53.6
	mean dbhob (cm)	15.0	15.8	15.9	16.3	16.8	17.3
	vol (m^3/ha)	216	260	303	355	412	466
	dom. height (m)	11	13	14	16	17	19
40	stems/ha	2211	2115	2138	2161	2137	2056
	ba (m^2/ha)	45.0	47.3	48.9	51.6	54.3	56.1
	mean dbhob (cm)	16.1	16.9	17.1	17.4	18.0	18.6
	vol (m^3/ha)	271	321	370	430	495	555
	dom. height (m)	13	15	16	18	19	21
45	stems/ha	2127	2014	2016	2017	1975	1881
	ba (m^2/ha)	48.2	50.2	51.6	54.0	56.4	58.1
	mean dbhob (cm)	17.0	17.8	18.1	18.5	19.1	19.8
	vol (m^3/ha)	326	382	438	504	576	643
	dom. height (m)	14	16	18	20	22	24
50	stems/ha	2055	1928	1913	1897	1840	1737
	ba (m^2/ha)	50.8	52.6	53.7	55.8	58.0	59.5
	mean dbhob (cm)	17.8	18.6	18.9	19.4	20.0	20.9
	vol (m^3/ha)	380	443	504	577	655	728
	dom. height (m)	16	18	20	22	24	26
55	stems/ha	1992	1854	1824	1794	1726	1616
	ba (m^2/ha)	53.0	54.4	55.3	57.1	59.1	60.3
	mean dbhob (cm)	18.4	19.3	19.7	20.1	20.9	21.8
	vol (m^3/ha)	433	502	568	646	730	808
	dom. height (m)	17	20	22	24	26	28

[a]stand dominant height (m) at 50 years

First row thinning in Vivian Forest red pine plantation, York County. (W. Masters, 1960)

Projected Yield for Thinned and Unthinned Stands (Table 3)

Table 3 is actually a series of tables which estimate gross total volume (m^3/ha) and basal area (m^2/ha) growth and yield for a range of thinning levels (including 0% thinning) 5 years after the treatment has occurred.

The tables may be used to evaluate the yields from various thinning regimes for a plantation up to the age of 65 years. They may also be used to compare the yields resulting from thinning operations to yields obtained in unthinned stands.

Table 3 can be used to predict the growth and yield of unthinned stands, or of stands not thinned after an initial thinning, by using the 0% thinning column. The figures in the normal yield table for unthinned stands (Table 2) correspond to the heavier stocked figures of the 0% thinning column. It is recommended that Table 3 be used when the basal area is known.

To use the projected yield table, the following steps are required:

1. Determine the site index and age for the stand.
2. Determine the basal area (m^2/ha) or volume (m^3/ha) in the stand.
3. Establish the percentage of the basal area or volume that is to be removed in the thinning.
4. Locate the appropriate table for the site index and age of the stand. This information is given at the top of each table.
5. Enter the table for the desired thinning level and initial basal area or volume. The result is given in the form of a 5-year growth estimate for volume and basal area, as well as an estimate of the volume and basal area yield at the end of the 5-year period.
6. Subsequent 5-year growth and yield estimates may be obtained by turning to the next table in the age series. This table is entered using the basal area or volume figure obtained in step 5. This process may be repeated up to a stand age of 65 years.

TABLE 3 Projected five-year growth and yield for thinned and unthinned red pine plantations

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 16			PRESENT AGE 20				PRESENT HEIGHT 6.6 M						HEIGHT IN 5 YEARS 8.3 M			
VOL (m^3/ha)	**35**	62	97	66	93	67	92	68	91	69	90	71	89	73	88	76	86
BA (m^2/ha)	**12**	13.5	26	15.0	25	15.4	25	15.8	24	16.0	24	16.6	24	17.5	24	18.5	23
VOL (m^3/ha)	**70**	54	124	57	111	58	109	58	106	59	104	61	100	64	96	67	92
BA (m^2/ha)	**24**	9.3	33	10.8	30	11.3	29	11.8	28	12.1	28	12.8	27	14.0	26	15.4	25
VOL (m^3/ha)	**105**	54	159	53	136	54	131	54	126	55	123	56	116	58	107	61	100
BA (m^2/ha)	**35**	6.9	42	8.3	36	8.7	35	9.2	33	9.5	33	10.2	31	11.5	29	13.0	27
	SITE INDEX 16			PRESENT AGE 25				PRESENT HEIGHT 8.3 M						HEIGHT IN 5 YEARS 9.8 M			
VOL (m^3/ha)	**70**	59	129	63	118	64	115	66	113	66	111	69	108	72	104	76	101
BA (m^2/ha)	**19**	9.6	29	11.1	26	11.5	26	11.9	25	12.2	25	12.9	24	14.0	23	15.2	22
VOL (m^3/ha)	**105**	55	160	57	140	58	135	59	131	60	128	61	122	65	114	69	108
BA (m^2/ha)	**28**	7.3	35	8.7	31	9.1	30	9.5	29	9.8	28	10.5	27	11.7	25	13.1	24
VOL (m^3/ha)	**140**	55	195	55	166	55	159	56	152	56	148	57	139	60	127	64	116
BA (m^2/ha)	**37**	5.8	43	7.0	36	7.4	35	7.8	33	8.1	33	8.7	31	9.9	28	11.3	26
	SITE INDEX 16			PRESENT AGE 30				PRESENT HEIGHT 9.8 M						HEIGHT IN 5 YEARS 11.4 M			
VOL (m^3/ha)	**105**	58	163	61	144	62	140	64	136	65	133	67	128	71	121	76	115
BA (m^2/ha)	**23**	7.5	31	8.8	27	9.2	26	9.6	26	9.9	25	10.5	24	11.6	23	12.9	22
VOL (m^3/ha)	**140**	55	195	57	168	58	161	59	155	60	151	62	143	65	132	70	123
BA (m^2/ha)	**31**	6.0	37	7.2	32	7.6	30	8.0	29	8.2	29	8.9	27	10.0	25	11.3	23
VOL (m^3/ha)	**175**	55	230	55	194	56	185	56	177	57	172	58	161	61	145	65	132
BA (m^2/ha)	**38**	5.0	43	6.0	37	6.4	35	6.7	33	7.0	32	7.6	30	8.7	28	10.0	25
VOL (m^3/ha)	**210**	57	267	55	222	55	211	55	200	55	194	56	180	58	160	62	142
BA (m^2/ha)	**46**	4.3	50	5.2	42	5.5	40	5.8	38	6.1	37	6.6	34	7.6	30	9.0	27
	SITE INDEX 16			PRESENT AGE 35				PRESENT HEIGHT 11.4 M						HEIGHT IN 5 YEARS 13.0 M			
VOL (m^3/ha)	**140**	57	197	60	171	61	165	62	159	63	155	66	147	70	137	76	128
BA (m^2/ha)	**26**	6.1	33	7.2	28	7.6	27	8.0	26	8.2	26	8.8	25	9.9	23	11.1	21
VOL (m^3/ha)	**175**	55	230	57	196	58	187	58	179	59	174	61	164	65	150	70	137
BA (m^2/ha)	**33**	5.1	38	6.1	32	6.4	31	6.8	30	7.0	29	7.6	27	8.7	25	9.9	23
VOL (m^3/ha)	**210**	55	265	55	222	56	212	56	202	57	195	58	182	61	163	66	146
BA (m^2/ha)	**39**	4.3	44	5.3	37	5.6	35	5.9	33	6.1	32	6.7	30	7.7	27	8.9	24
VOL (m^3/ha)	**245**	57	302	55	250	55	237	55	225	56	218	56	201	59	178	63	157
BA (m^2/ha)	**46**	3.8	50	4.6	41	4.9	39	5.2	37	5.4	36	5.9	33	6.8	30	8.1	26
VOL (m^3/ha)	**280**	59	339	56	279	55	264	55	249	55	241	55	221	57	194	60	169
BA (m^2/ha)	**52**	3.3	56	4.1	46	4.4	43	4.6	41	4.8	40	5.3	36	6.2	32	7.3	28

TABLE 3 (continued)

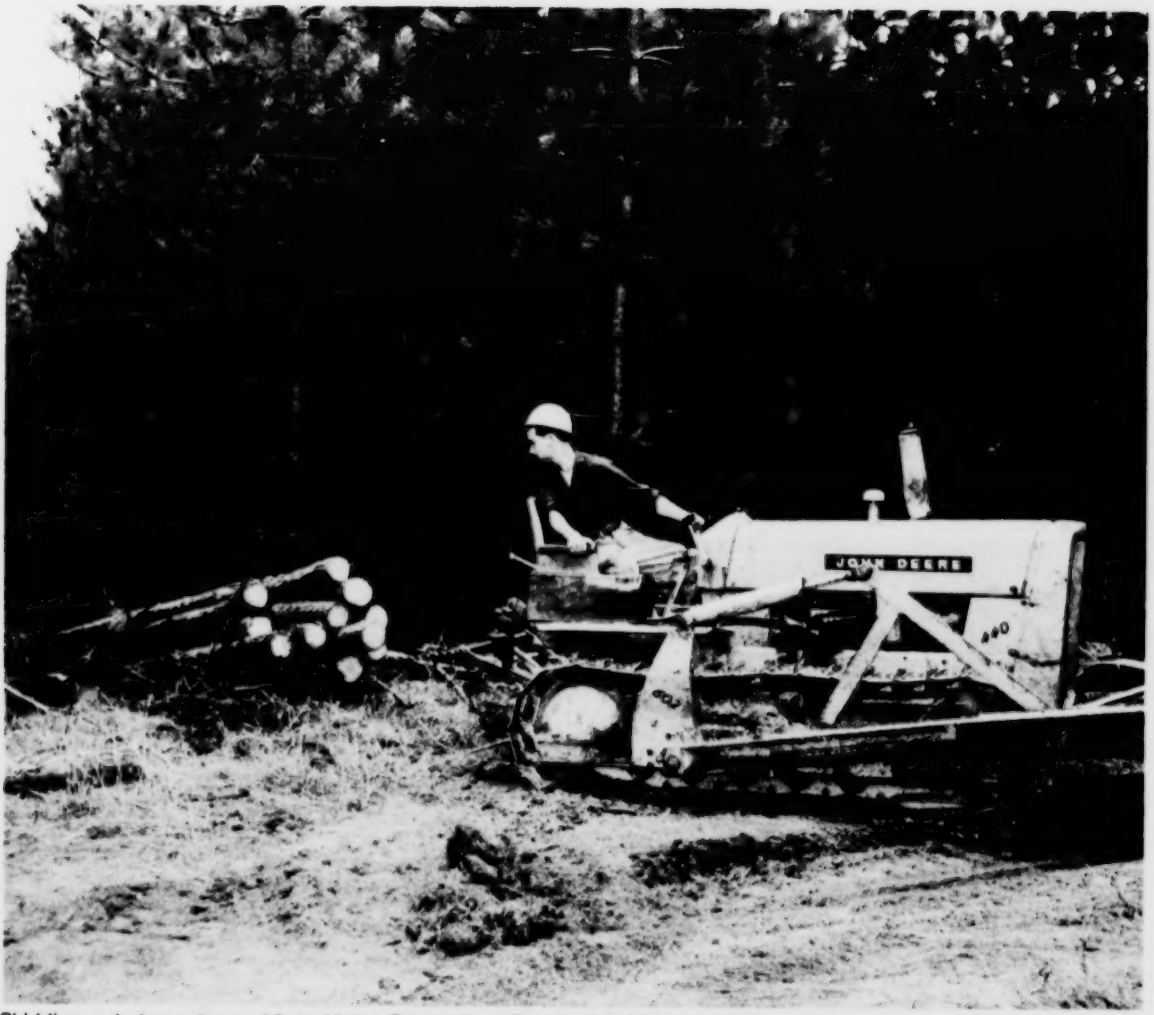
	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 16	PRESENT AGE 40						PRESENT HEIGHT 13.0 M						HEIGHT IN 5 YEARS 14.5 M			
VOL (m^3/ha)	**140**	58	198	62	173	64	167	65	162	66	158	69	151	74	141	81	133
BA (m^2/ha)	**23**	6.0	29	7.1	26	7.5	25	7.8	24	8.1	23	8.7	22	9.6	21	10.8	20
VOL (m^3/ha)	**175**	55	230	58	197	59	189	61	181	61	177	64	167	68	153	75	141
BA (m^2/ha)	**29**	5.0	34	6.0	29	6.4	28	6.7	27	6.9	26	7.5	25	8.5	23	9.7	21
VOL (m^3/ha)	**210**	55	265	56	223	57	213	58	203	58	197	60	184	64	166	70	150
BA (m^2/ha)	**35**	4.3	39	5.2	33	5.5	31	5.8	30	6.1	29	6.6	27	7.5	25	8.7	22
VOL (m^3/ha)	**245**	55	300	55	250	55	237	56	225	56	218	58	202	61	180	66	160
BA (m^2/ha)	**40**	3.8	44	4.6	37	4.9	35	5.2	33	5.4	32	5.9	30	6.8	27	7.9	24
VOL (m^3/ha)	**280**	56	336	55	277	55	263	55	249	55	241	56	222	58	195	63	171
BA (m^2/ha)	**46**	3.3	49	4.1	41	4.3	39	4.6	37	4.8	35	5.3	33	6.1	29	7.2	25
VOL (m^3/ha)	**315**	58	373	55	306	55	290	55	273	55	264	55	242	57	211	60	183
BA (m^2/ha)	**52**	3.0	55	3.7	45	3.9	43	4.2	40	4.3	39	4.8	36	5.6	31	6.6	27
	SITE INDEX 16	PRESENT AGE 45						PRESENT HEIGHT 14.5 M						HEIGHT IN 5 YEARS 16.0 M			
VOL (m^3/ha)	**175**	55	230	59	198	60	190	62	183	63	178	66	168	71	155	77	144
BA (m^2/ha)	**26**	4.9	31	5.8	26	6.1	25	6.5	24	6.7	24	7.2	23	8.1	21	9.3	19
VOL (m^3/ha)	**210**	54	264	56	223	57	213	58	203	59	198	61	185	66	168	72	152
BA (m^2/ha)	**31**	4.2	35	5.1	30	5.3	28	5.7	27	5.9	26	6.4	25	7.3	22	8.4	20
VOL (m^3/ha)	**245**	53	298	54	249	55	237	56	225	56	219	58	203	62	182	68	162
BA (m^2/ha)	**36**	3.7	40	4.5	33	4.7	32	5.0	30	5.2	29	5.7	27	6.5	24	7.6	22
VOL (m^3/ha)	**280**	54	334	53	276	54	262	54	248	55	240	56	222	59	196	64	173
BA (m^2/ha)	**41**	3.2	44	4.0	37	4.2	35	4.5	33	4.6	32	5.1	30	5.9	26	7.0	23
VOL (m^3/ha)	**315**	55	370	53	304	53	288	54	272	54	263	55	241	57	212	62	184
BA (m^2/ha)	**46**	2.9	49	3.6	40	3.8	38	4.0	36	4.2	35	4.6	32	5.4	28	6.4	25
VOL (m^3/ha)	**350**	57	407	54	333	54	315	53	297	53	286	54	261	56	228	59	196
BA (m^2/ha)	**51**	2.6	54	3.3	44	3.5	42	3.7	39	3.8	38	4.2	35	4.9	30	5.9	26
VOL (m^3/ha)	**385**	59	444	55	361	54	341	54	321	53	309	53	282	55	244	58	208
BA (m^2/ha)	**56**	2.4	59	3.0	48	3.2	45	3.4	43	3.5	41	3.9	38	4.6	32	5.5	28
	SITE INDEX 16	PRESENT AGE 50						PRESENT HEIGHT 16.0 M						HEIGHT IN 5 YEARS 17.5 M			
VOL (m^3/ha)	**210**	52	262	55	222	56	212	58	203	59	197	61	185	66	168	73	153
BA (m^2/ha)	**28**	3.9	32	4.8	27	5.0	26	5.3	25	5.5	24	6.0	23	6.8	21	7.8	19
VOL (m^3/ha)	**245**	51	296	53	248	54	236	55	225	56	218	58	202	62	181	68	162
BA (m^2/ha)	**33**	3.4	36	4.2	30	4.4	29	4.7	27	4.9	27	5.3	25	6.1	22	7.1	20
VOL (m^3/ha)	**280**	51	331	52	275	52	261	53	247	54	239	55	221	59	196	64	173
BA (m^2/ha)	**37**	3.1	40	3.7	33	4.0	32	4.2	30	4.4	29	4.8	27	5.6	24	6.5	21
VOL (m^3/ha)	**315**	52	367	51	302	52	286	52	271	52	261	54	240	56	211	61	184
BA (m^2/ha)	**42**	2.7	45	3.4	37	3.6	35	3.8	33	4.0	32	4.4	29	5.1	26	6.0	22
VOL (m^3/ha)	**350**	53	403	51	330	51	312	51	295	52	284	52	260	55	227	59	195
BA (m^2/ha)	**46**	2.5	49	3.1	40	3.3	38	3.5	36	3.6	35	4.0	32	4.7	28	5.6	24
VOL (m^3/ha)	**385**	55	440	52	359	52	339	51	319	51	307	52	280	53	243	57	207
BA (m^2/ha)	**51**	2.3	53	2.8	44	3.0	41	3.2	39	3.3	37	3.7	34	4.3	30	5.2	25
VOL (m^3/ha)	**420**	56	476	53	388	52	366	52	344	51	331	51	301	52	259	55	220
BA (m^2/ha)	**56**	2.1	58	2.6	47	2.8	44	2.9	42	3.1	40	3.4	37	4.0	32	4.8	27

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 16			PRESENT AGE 55				PRESENT HEIGHT 17.5 M						HEIGHT IN 5 YEARS 19.0 M			
VOL (m^3/ha)	**245**	49	294	51	245	51	234	53	222	53	216	56	200	60	179	66	161
BA (m^2/ha)	**30**	3.1	33	3.8	28	4.0	26	4.3	25	4.4	24	4.8	22	5.5	20	6.5	18
VOL (m^3/ha)	**280**	48	328	49	272	50	258	51	245	51	237	53	219	57	194	62	171
BA (m^2/ha)	**34**	2.8	37	3.4	30	3.6	29	3.8	27	4.0	27	4.3	25	5.0	22	5.9	19
VOL (m^3/ha)	**315**	49	364	49	299	49	284	49	268	50	259	51	238	54	209	59	182
BA (m^2/ha)	**38**	2.5	41	3.1	34	3.2	32	3.4	30	3.6	29	3.9	27	4.6	23	5.5	20
VOL (m^3/ha)	**350**	50	400	48	327	48	309	49	292	49	281	50	257	52	224	57	193
BA (m^2/ha)	**42**	2.3	45	2.8	37	3.0	35	3.1	33	3.3	32	3.6	29	4.2	25	5.0	22
VOL (m^3/ha)	**385**	51	436	49	355	48	336	48	316	48	304	49	278	51	240	55	205
BA (m^2/ha)	**47**	2.1	49	2.5	40	2.7	38	2.9	35	3.0	34	3.3	31	3.9	27	4.7	23
VOL (m^3/ha)	**420**	52	472	49	384	49	362	48	341	48	328	49	298	50	257	53	217
BA (m^2/ha)	**51**	1.9	53	2.4	43	2.5	41	2.7	38	2.8	37	3.1	33	3.6	29	4.4	24
VOL (m^3/ha)	**455**	54	509	50	413	49	389	49	366	49	351	48	319	49	274	52	230
BA (m^2/ha)	**55**	1.8	57	2.2	46	2.3	43	2.5	41	2.6	39	2.9	36	3.4	31	4.1	26
VOL (m^3/ha)	**490**	56	546	51	442	50	416	49	391	49	375	48	340	49	291	51	243
BA (m^2/ha)	**59**	1.6	61	2.0	49	2.2	46	2.3	44	2.4	42	2.7	38	3.2	33	3.8	27
	SITE INDEX 16			PRESENT AGE 60				PRESENT HEIGHT 19.0 M						HEIGHT IN 5 YEARS 20.4 M			
VOL (m^3/ha)	**280**	44	324	45	268	46	254	46	241	47	233	49	214	52	189	58	166
BA (m^2/ha)	**31**	2.4	34	2.9	28	3.1	26	3.3	25	3.4	24	3.7	22	4.3	20	5.1	17
VOL (m^3/ha)	**315**	45	360	44	295	45	279	45	264	46	255	47	233	50	204	55	177
BA (m^2/ha)	**35**	2.1	37	2.6	31	2.8	29	2.9	27	3.1	26	3.4	24	3.9	21	4.7	18
VOL (m^3/ha)	**350**	45	395	44	323	44	305	44	288	45	277	46	253	48	220	52	189
BA (m^2/ha)	**39**	1.9	41	2.4	34	2.5	32	2.7	30	2.8	29	3.1	26	3.6	23	4.3	20
VOL (m^3/ha)	**385**	46	431	44	351	44	331	44	312	44	300	45	273	47	236	50	201
BA (m^2/ha)	**43**	1.8	45	2.2	36	2.3	34	2.5	32	2.6	31	2.8	28	3.3	25	4.0	21
VOL (m^3/ha)	**420**	48	468	45	380	44	358	44	336	44	324	44	294	46	253	49	213
BA (m^2/ha)	**47**	1.6	48	2.0	39	2.1	37	2.3	35	2.4	34	2.6	31	3.1	26	3.7	22
VOL (m^3/ha)	**455**	49	504	46	408	45	385	45	361	44	347	44	315	45	269	47	226
BA (m^2/ha)	**51**	1.5	52	1.9	42	2.0	40	2.1	37	2.2	36	2.4	33	2.9	28	3.5	24
VOL (m^3/ha)	**490**	51	541	47	437	46	412	45	386	45	371	44	336	45	287	46	239
BA (m^2/ha)	**55**	1.4	56	1.7	45	1.8	43	2.0	40	2.1	39	2.3	35	2.7	30	3.3	25
VOL (m^3/ha)	**525**	53	578	48	466	47	439	46	411	45	395	44	357	44	304	46	252
BA (m^2/ha)	**59**	1.3	60	1.6	48	1.7	46	1.8	43	1.9	41	2.1	37	2.5	32	3.1	26
VOL (m^3/ha)	**560**	55	615	49	496	48	466	47	437	46	419	45	378	44	321	45	266
BA (m^2/ha)	**62**	1.2	64	1.5	51	1.6	48	1.7	45	1.8	43	2.0	39	2.4	33	2.9	28

Pulpwood stacked along road through Orr Lake Forest, Simcoe County. (T. Jenkins, 1961)

TABLE 3 (continued)



Skidding red pine pulpwood from Vivian Forest, York County. (W. Masters, 1960)

	Stand before thinning	0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 18			PRESENT AGE 20				PRESENT HEIGHT 7.5 M						HEIGHT IN 5 YEARS 9.3 M			
VOL (m^3/ha)	35	72	107	76	103	77	102	78	101	79	101	81	100	84	98	87	97
BA (m^2/ha)	11	14.2	25	15.6	24	16.0	24	16.3	24	16.6	24	17.1	24	18.0	23	18.9	23
VOL (m^3/ha)	70	62	132	65	120	66	117	68	115	68	113	70	110	74	106	78	102
BA (m^2/ha)	21	10.0	31	11.6	28	12.0	28	12.5	27	12.8	27	13.5	26	14.7	25	16.0	24
VOL (m^3/ha)	105	60	165	61	143	61	138	62	134	62	131	64	125	67	116	71	109
BA (m^2/ha)	31	7.6	38	9.0	34	9.4	32	9.9	31	10.2	31	11.0	29	12.2	27	13.7	26
	SITE INDEX 18			PRESENT AGE 25				PRESENT HEIGHT 9.3 M						HEIGHT IN 5 YEARS 11.1 M			
VOL (m^3/ha)	70	68	138	73	128	74	125	76	123	77	122	79	119	83	115	88	112
BA (m^2/ha)	17	10.3	27	11.7	25	12.1	25	12.6	24	12.8	24	13.5	23	14.5	23	15.7	22
VOL (m^3/ha)	105	62	167	65	148	67	144	68	140	69	137	71	132	75	124	80	118
BA (m^2/ha)	25	7.9	33	9.3	29	9.7	28	10.2	27	10.4	27	11.1	26	12.3	24	13.6	23
VOL (m^3/ha)	140	61	201	62	173	63	166	63	160	64	156	66	147	69	136	74	126
BA (m^2/ha)	33	6.4	39	7.6	34	8.0	32	8.4	31	8.7	30	9.4	29	10.6	27	12.0	25

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 18	PRESENT AGE 30						PRESENT HEIGHT 11.1 M						HEIGHT IN 5 YEARS 12.8 M			
VOL (m^3/ha)	**105**	66	171	71	153	72	149	74	145	75	143	78	138	82	132	88	126
BA (m^2/ha)	**21**	8.0	29	9.3	26	9.7	25	10.2	24	10.4	24	11.1	23	12.1	22	13.3	21
VOL (m^3/ha)	**140**	62	202	65	176	66	170	68	164	69	160	71	153	75	142	81	133
BA (m^2/ha)	**27**	6.5	34	7.7	29	8.1	28	8.5	27	8.8	27	9.4	26	10.5	24	11.8	22
VOL (m^3/ha)	**175**	61	236	62	201	63	193	64	185	65	180	66	169	70	155	76	142
BA (m^2/ha)	**34**	5.4	39	6.5	34	6.0	32	7.3	31	7.5	30	8.2	28	9.2	26	10.6	24
VOL (m^3/ha)	**210**	62	272	61	228	62	218	62	207	62	201	64	187	67	169	71	152
BA (m^2/ha)	**41**	4.6	45	5.6	38	6.0	36	6.3	35	6.5	34	7.1	31	8.2	28	9.5	25
	SITE INDEX 18	PRESENT AGE 35						PRESENT HEIGHT 12.8 M						HEIGHT IN 5 YEARS 14.6 M			
VOL (m^3/ha)	**140**	64	204	68	179	70	173	72	168	73	165	76	157	81	148	87	140
BA (m^2/ha)	**23**	6.5	30	7.7	26	8.0	26	8.4	25	8.7	24	9.3	23	10.3	22	11.5	21
VOL (m^3/ha)	**175**	62	237	64	203	65	195	67	187	68	183	70	173	75	159	81	147
BA (m^2/ha)	**29**	5.4	35	6.5	30	6.9	29	7.2	28	7.5	27	8.1	25	9.1	23	10.4	22
VOL (m^3/ha)	**210**	61	271	62	229	63	219	64	209	64	203	66	190	70	172	76	156
BA (m^2/ha)	**35**	4.7	40	5.7	34	6.0	32	6.3	31	6.5	30	7.1	28	8.1	25	9.4	23
VOL (m^3/ha)	**245**	62	307	61	256	62	244	62	232	62	225	64	208	67	186	72	166
BA (m^2/ha)	**41**	4.1	45	5.0	37	5.3	36	5.6	34	5.8	33	6.3	31	7.3	27	8.5	24
VOL (m^3/ha)	**280**	63	343	61	284	61	270	61	255	61	247	62	228	65	202	69	177
BA (m^2/ha)	**46**	3.6	50	4.4	41	4.7	39	5.0	37	5.2	36	5.7	33	6.6	30	7.8	26
	SITE INDEX 18	PRESENT AGE 40						PRESENT HEIGHT 14.6 M						HEIGHT IN 5 YEARS 16.3 M			
VOL (m^3/ha)	**175**	62	237	66	205	67	197	69	190	70	185	73	176	78	163	85	151
BA (m^2/ha)	**26**	5.3	31	6.4	27	6.7	26	7.0	25	7.3	24	7.8	23	8.8	21	10.0	20
VOL (m^3/ha)	**210**	60	270	63	230	64	220	65	210	60	205	68	192	73	175	80	160
BA (m^2/ha)	**31**	4.6	35	5.5	30	5.8	29	6.2	28	6.4	27	6.9	25	7.9	23	9.0	21
VOL (m^3/ha)	**245**	60	305	61	256	62	244	63	232	63	225	65	210	69	189	75	170
BA (m^2/ha)	**36**	4.0	40	4.9	33	5.2	32	5.5	30	5.7	29	6.2	27	7.1	25	8.3	22
VOL (m^3/ha)	**280**	61	341	60	283	61	269	61	255	61	247	63	228	66	203	72	180
BA (m^2/ha)	**41**	3.6	44	4.4	37	4.6	35	4.9	33	5.1	32	5.6	30	6.4	27	7.6	24
VOL (m^3/ha)	**315**	62	377	60	311	60	295	60	279	60	270	61	248	64	218	69	191
BA (m^2/ha)	**46**	3.2	49	3.9	41	4.2	38	4.4	36	4.6	35	5.1	32	5.9	29	7.0	25
VOL (m^3/ha)	**350**	64	414	61	340	60	321	60	303	60	293	61	268	62	234	66	203
BA (m^2/ha)	**51**	2.9	54	3.6	44	3.8	42	4.0	40	4.2	38	4.6	35	5.4	31	6.5	27

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 18	PRESENT AGE 45						PRESENT HEIGHT 16.3 M						HEIGHT IN 5 YEARS 18.0 M			
VOL (m^3/ha)	**210**	59	269	62	229	64	220	65	210	66	205	69	193	74	176	81	162
BA (m^2/ha)	**27**	4.4	32	5.3	27	5.5	26	5.9	25	6.1	24	6.6	23	7.4	21	8.5	19
VOL (m^3/ha)	**245**	58	303	60	225	61	243	62	232	63	225	65	210	70	189	77	171
BA (m^2/ha)	**32**	3.8	36	4.7	30	4.9	29	5.2	27	5.4	27	5.9	25	6.7	22	7.8	20
VOL (m^3/ha)	**280**	58	338	59	282	59	268	60	254	61	246	63	228	67	204	73	181
BA (m^2/ha)	**36**	3.4	40	4.2	33	4.4	32	4.7	30	4.8	29	5.3	27	6.1	24	7.2	21
VOL (m^3/ha)	**315**	59	374	58	309	58	293	59	278	59	268	61	247	64	218	69	192
BA (m^2/ha)	**41**	3.1	44	3.8	36	4.0	35	4.2	33	4.4	32	4.8	29	5.6	26	6.6	23
VOL (m^3/ha)	**350**	60	410	58	337	58	319	58	302	59	291	59	267	62	234	67	203
BA (m^2/ha)	**46**	2.8	48	3.4	40	3.6	38	3.9	36	4.0	34	4.4	32	5.1	28	6.1	24
VOL (m^3/ha)	**385**	62	447	59	366	58	346	58	326	58	314	59	287	60	250	64	215
BA (m^2/ha)	**50**	2.5	53	3.1	43	3.3	41	3.5	38	3.7	37	4.1	34	4.8	30	5.7	25
VOL (m^3/ha)	**420**	64	484	60	394	59	372	58	351	58	338	58	308	59	266	63	227
BA (m^2/ha)	**55**	2.3	57	2.9	46	3.1	44	3.3	41	3.4	40	3.8	36	4.4	31	5.3	27
	SITE INDEX 18	PRESENT AGE 50						PRESENT HEIGHT 18.0 M						HEIGHT IN 5 YEARS 19.7 M			
VOL (m^3/ha)	**245**	56	301	58	253	59	241	60	230	61	223	64	208	69	188	75	170
BA (m^2/ha)	**29**	3.5	32	4.3	27	4.5	26	4.8	25	4.9	24	5.4	23	6.2	20	7.1	18
VOL (m^3/ha)	**280**	55	335	56	279	57	266	58	252	59	244	61	226	65	202	71	180
BA (m^2/ha)	**33**	3.1	36	3.8	30	4.0	29	4.3	27	4.4	26	4.9	24	5.6	22	6.6	19
VOL (m^3/ha)	**315**	56	371	55	306	56	291	57	275	57	266	59	245	62	217	68	190
BA (m^2/ha)	**37**	2.8	40	3.4	33	3.6	31	3.9	30	4.0	29	4.4	26	5.1	23	6.1	21
VOL (m^3/ha)	**350**	56	406	55	334	55	316	56	299	56	288	57	265	60	232	65	202
BA (m^2/ha)	**41**	2.5	44	3.1	36	3.3	34	3.5	32	3.7	31	4.0	29	4.7	25	5.6	22
VOL (m^3/ha)	**385**	58	443	55	362	55	342	55	323	55	311	56	285	58	248	63	213
BA (m^2/ha)	**45**	2.3	48	2.9	39	3.1	37	3.2	35	3.4	34	3.7	31	4.4	27	5.2	23
VOL (m^3/ha)	**420**	59	479	56	391	55	369	55	347	55	335	56	305	57	264	61	225
BA (m^2/ha)	**49**	2.1	52	2.7	42	2.8	40	3.0	37	3.1	36	3.5	33	4.1	28	4.9	24
VOL (m^3/ha)	**455**	61	516	57	420	56	396	56	372	55	358	55	326	56	281	59	238
BA (m^2/ha)	**53**	2.0	55	2.5	45	2.6	43	2.8	40	2.9	39	3.2	55	3.8	30	4.6	26
VOL (m^3/ha)	**490**	63	553	58	449	57	423	56	397	56	382	55	347	56	298	58	251
BA (m^2/ha)	**58**	1.9	59	2.3	48	2.4	45	2.6	43	2.7	41	3.0	37	3.6	32	4.3	27

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 18	PRESENT AGE 55						PRESENT HEIGHT 19.7 M						HEIGHT IN 5 YEARS 21.3 M			
VOL (m^3/ha)	**280**	51	331	52	275	53	261	54	248	55	240	57	222	61	198	67	175
BA (m^2/ha)	**30**	2.7	33	3.3	27	3.5	26	3.7	25	3.9	24	4.2	22	4.9	20	5.7	17
VOL (m^3/ha)	**315**	51	366	51	302	52	286	52	271	53	262	55	241	58	213	64	186
BA (m^2/ha)	**34**	2.4	36	3.0	30	3.2	28	3.4	27	3.5	26	3.8	24	4.5	21	5.3	19
VOL (m^3/ha)	**350**	52	402	51	330	51	312	51	295	52	284	53	261	56	228	61	197
BA (m^2/ha)	**38**	2.2	40	2.7	33	2.9	31	3.1	29	3.2	28	3.5	26	4.1	23	4.9	20
VOL (m^3/ha)	**385**	53	438	51	358	51	338	51	319	51	307	52	281	54	244	59	209
BA (m^2/ha)	**41**	2.0	43	2.5	36	2.6	34	2.8	32	2.9	30	3.2	28	3.8	24	4.6	21
VOL (m^3/ha)	**420**	54	474	51	386	51	365	51	343	51	330	51	301	53	260	57	221
BA (m^2/ha)	**45**	1.9	47	2.3	38	2.4	36	2.6	34	2.7	33	3.0	30	3.5	26	4.3	22
VOL (m^3/ha)	**455**	56	511	52	415	51	391	51	368	51	354	51	322	52	277	55	234
BA (m^2/ha)	**49**	1.7	51	2.1	41	2.3	39	2.4	36	2.5	35	2.8	32	3.3	27	4.0	23
VOL (m^3/ha)	**490**	57	547	53	444	52	418	51	393	51	378	51	342	51	293	54	246
BA (m^2/ha)	**53**	1.6	54	2.0	44	2.1	41	2.3	39	2.4	37	2.6	34	3.1	29	3.7	25
VOL (m^3/ha)	**525**	59	584	54	473	53	445	52	418	52	401	51	364	51	311	53	259
BA (m^2/ha)	**56**	1.5	58	1.9	47	2.0	44	2.1	41	2.2	40	2.5	36	2.9	31	3.5	26
VOL (m^3/ha)	**560**	61	621	55	502	54	472	53	443	52	426	51	385	51	328	52	273
BA (m^2/ha)	**60**	1.4	62	1.8	50	1.9	47	2.0	44	2.1	42	2.3	38	2.7	33	3.3	27
	SITE INDEX 18	PRESENT AGE 60						PRESENT HEIGHT 21.3 M						HEIGHT IN 5 YEARS 22.9 M			
VOL (m^3/ha)	**280**	45	325	46	268	46	255	47	241	48	233	49	215	53	190	59	167
BA (m^2/ha)	**28**	2.1	30	2.6	25	2.8	23	3.0	22	3.1	22	3.4	20	3.9	18	4.6	15
VOL (m^3/ha)	**315**	45	360	45	296	45	280	46	264	46	255	48	234	51	205	56	178
BA (m^2/ha)	**31**	1.9	33	2.4	27	2.5	26	2.7	24	2.8	24	3.1	22	3.6	19	4.3	16
VOL (m^3/ha)	**350**	46	396	45	324	45	306	45	288	45	278	46	254	49	221	53	190
BA (m^2/ha)	**35**	1.7	36	2.2	30	2.3	28	2.4	27	2.5	26	2.8	23	3.3	20	3.9	18
VOL (m^3/ha)	**385**	47	432	45	352	45	332	45	312	45	301	45	274	47	237	51	202
BA (m^2/ha)	**38**	1.6	40	2.0	32	2.1	31	2.2	29	2.3	28	2.6	25	3.0	22	3.6	19
VOL (m^3/ha)	**420**	48	468	45	380	45	358	45	337	45	324	45	295	46	253	50	214
BA (m^2/ha)	**42**	1.5	43	1.8	35	1.9	33	2.1	31	2.2	30	2.4	27	2.8	23	3.4	20
VOL (m^3/ha)	**455**	50	505	46	409	45	385	45	362	45	348	45	315	46	270	48	227
BA (m^2/ha)	**45**	1.4	46	1.7	38	1.8	35	1.9	33	2.0	32	2.2	39	2.6	25	3.2	21
VOL (m^3/ha)	**490**	51	541	47	438	46	412	45	387	45	371	45	336	45	287	47	240
BA (m^2/ha)	**49**	1.3	50	1.6	40	1.7	38	1.8	36	1.9	34	2.1	31	2.4	26	3.0	22
VOL (m^3/ha)	**525**	53	578	48	467	47	439	46	412	46	395	45	358	45	304	46	253
BA (m^2/ha)	**52**	1.2	53	1.5	43	1.6	40	1.7	38	1.7	36	1.9	33	2.3	28	2.8	23
VOL (m^3/ha)	**560**	55	615	49	496	48	466	47	437	46	420	45	379	45	322	46	266
BA (m^2/ha)	**55**	1.1	57	1.4	46	1.5	43	1.6	40	1.6	39	1.8	35	2.2	30	2.7	25
VOL (m^3/ha)	**595**	57	652	50	525	49	494	48	463	47	444	46	400	45	339	45	280
BA (m^2/ha)	**59**	1.1	60	1.3	48	1.4	45	1.5	43	1.6	41	1.7	37	2.1	31	2.5	26

Second thinning of red pine pulpwood and utility poles in Larose Forest, Prescott and Russell County. (W. Masters, 1959)

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 20			PRESENT AGE 20				PRESENT HEIGHT 8.3 M						HEIGHT IN 5 YEARS 10.3 M			
VOL (m^3/ha)	**70**	70	140	74	129	75	126	77	124	78	123	80	119	83	115	88	112
BA (m^2/ha)	**19**	10.7	29	12.2	27	12.7	27	13.1	26	13.4	26	14.1	25	15.3	24	16.5	24
VOL (m^3/ha)	**105**	66	171	68	151	69	146	70	142	71	139	73	133	76	125	80	119
BA (m^2/ha)	**28**	8.2	36	9.6	32	10.1	31	10.6	30	10.9	29	11.6	28	12.9	26	14.3	25
VOL (m^3/ha)	**140**	67	207	66	177	67	170	67	163	67	159	68	150	71	138	75	127
BA (m^2/ha)	**37**	6.5	43	7.9	37	8.3	36	8.7	34	9.0	33	9.7	31	11.0	29	12.5	27
	SITE INDEX 20			PRESENT AGE 25				PRESENT HEIGHT 10.3 M						HEIGHT IN 5 YEARS 12.3 M			
VOL (m^3/ha)	**105**	70	175	75	157	76	153	77	149	78	146	81	141	85	135	91	129
BA (m^2/ha)	**22**	8.5	31	9.9	28	10.3	27	10.7	26	11.0	26	11.7	25	12.8	24	14.1	23
VOL (m^3/ha)	**140**	68	208	70	180	71	174	72	168	72	164	75	156	79	146	84	136
BA (m^2/ha)	**29**	6.9	36	8.2	32	8.5	30	9.0	29	9.3	29	10.0	27	11.1	26	12.5	24
VOL (m^3/ha)	**175**	68	243	68	206	68	198	69	189	69	184	71	173	74	158	79	145
BA (m^2/ha)	**36**	5.7	42	6.9	36	7.3	34	7.7	33	7.9	32	8.6	30	9.8	28	11.2	25
VOL (m^3/ha)	**210**	70	280	68	234	67	223	67	213	68	206	68	192	71	173	75	155
BA (m^2/ha)	**44**	4.9	48	6.0	41	6.3	39	6.7	37	6.9	36	7.5	33	8.6	30	10.0	27
	SITE INDEX 20			PRESENT AGE 30				PRESENT HEIGHT 12.3 M						HEIGHT IN 5 YEARS 14.3 M			
VOL (m^3/ha)	**140**	70	210	74	184	75	179	77	173	78	170	81	162	86	153	92	144
BA (m^2/ha)	**24**	6.9	31	8.2	28	8.6	27	9.0	26	9.2	25	9.9	24	11.0	23	12.3	22
VOL (m^3/ha)	**175**	68	243	70	209	71	201	72	193	83	188	75	178	80	164	86	152
BA (m^2/ha)	**30**	5.8	36	7.0	31	7.3	30	7.7	29	8.0	28	8.6	27	9.7	25	11.0	23
VOL (m^3/ha)	**210**	68	278	68	235	69	225	69	215	70	209	72	195	75	177	81	161
BA (m^2/ha)	**36**	5.0	41	6.1	35	6.4	34	6.8	32	7.0	31	7.6	29	8.7	27	10.0	24
VOL (m^3/ha)	**245**	69	314	68	262	68	250	68	238	68	230	69	214	72	192	77	171
BA (m^2/ha)	**42**	4.4	47	5.3	39	5.6	37	6.0	36	6.2	34	6.8	32	7.8	29	9.1	26
VOL (m^3/ha)	**280**	71	351	68	291	68	276	68	262	68	253	68	234	70	207	74	182
BA (m^2/ha)	**48**	3.9	52	4.8	43	5.0	41	5.3	39	5.6	38	6.1	35	7.1	31	8.3	27
	SITE INDEX 20			PRESENT AGE 35				PRESENT HEIGHT 14.3 M						HEIGHT IN 5 YEARS 16.2 M			
VOL (m^3/ha)	**175**	69	244	72	211	74	203	75	196	76	192	79	182	85	169	91	158
BA (m^2/ha)	**26**	5.8	32	6.9	28	7.2	27	7.6	26	7.8	25	8.5	24	9.5	22	10.7	21
VOL (m^3/ha)	**210**	67	277	69	236	70	226	71	217	72	211	75	198	79	181	86	166
BA (m^2/ha)	**31**	5.0	36	6.0	31	6.3	30	6.7	29	6.9	28	7.5	26	8.5	24	9.7	22
VOL (m^3/ha)	**245**	67	312	68	262	68	250	69	239	70	232	71	216	75	195	81	176
BA (m^2/ha)	**37**	4.4	41	5.3	34	5.6	33	5.9	31	6.1	30	6.7	28	7.7	26	8.9	23
VOL (m^3/ha)	**280**	68	348	67	290	67	276	68	262	68	254	69	235	72	209	78	186
BA (m^2/ha)	**42**	3.9	46	4.7	38	5.0	36	5.3	34	5.5	33	6.0	31	7.0	28	8.2	25
VOL (m^3/ha)	**315**	70	385	67	318	67	302	67	286	67	276	68	254	70	225	75	197
BA (m^2/ha)	**47**	3.5	50	4.3	42	4.5	40	4.8	37	5.0	36	5.5	33	6.4	30	7.5	26
VOL (m^3/ha)	**350**	72	422	68	347	67	328	67	310	67	299	67	275	69	241	73	209
BA (m^2/ha)	**52**	3.2	55	3.9	45	4.1	43	4.4	41	4.6	39	5.0	36	5.9	32	7.2	28

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 20	PRESENT AGE 40						PRESENT HEIGHT 16.2 M						HEIGHT IN 5 YEARS 18.1 M			
VOL (m^3/ha)	**210**	66	276	70	236	71	227	73	218	74	212	77	200	82	184	89	170
BA (m^2/ha)	**28**	4.8	32	5.8	28	6.1	27	6.4	26	6.6	25	7.2	24	8.1	22	9.3	20
VOL (m^3/ha)	**245**	65	310	67	262	68	250	69	239	70	232	73	217	77	197	84	179
BA (m^2/ha)	**32**	4.2	36	5.1	31	5.4	29	5.7	28	5.9	27	6.4	26	7.3	23	8.5	21
VOL (m^3/ha)	**280**	66	346	66	289	66	275	67	261	68	253	70	235	74	211	80	189
BA (m^2/ha)	**37**	3.8	40	4.6	34	4.8	32	5.1	31	5.3	30	5.8	28	6.7	25	7.8	22
VOL (m^3/ha)	**315**	66	381	65	316	66	300	66	285	66	275	68	254	71	226	77	199
BA (m^2/ha)	**41**	3.4	45	4.1	37	4.4	35	4.7	33	4.8	32	5.3	30	6.1	27	7.2	23
VOL (m^3/ha)	**350**	68	418	65	344	65	326	65	309	66	298	66	274	69	241	74	210
BA (m^2/ha)	**46**	3.1	49	3.8	40	4.0	38	4.3	36	4.4	35	4.9	32	5.7	28	6.7	25
VOL (m^3/ha)	**385**	70	455	66	373	66	353	65	333	65	321	66	294	68	257	72	222
BA (m^2/ha)	**50**	2.8	53	3.5	44	3.7	41	3.9	39	4.1	38	4.5	34	5.2	30	6.3	26
VOL (m^3/ha)	**420**	72	492	67	402	66	380	66	358	66	345	65	315	66	273	70	234
BA (m^2/ha)	**55**	2.6	57	3.2	47	3.4	44	3.6	42	3.8	40	4.2	37	4.9	32	5.9	28
	SITE INDEX 20	PRESENT AGE 45						PRESENT HEIGHT 18.1 M						HEIGHT IN 5 YEARS 20.0 M			
VOL (m^3/ha)	**245**	63	308	66	261	67	249	68	238	69	231	72	217	77	197	85	179
BA (m^2/ha)	**29**	3.9	33	4.8	28	5.0	26	5.3	25	5.5	25	6.0	23	6.8	21	7.9	19
VOL (m^3/ha)	**280**	63	343	64	287	65	273	66	260	67	252	69	234	73	210	80	189
BA (m^2/ha)	**33**	3.5	36	4.3	30	4.5	29	4.8	29	5.0	27	5.4	25	6.2	22	7.3	20
VOL (m^3/ha)	**315**	63	378	63	314	63	298	64	283	65	274	66	253	70	225	77	199
BA (m^2/ha)	**37**	3.2	40	3.9	33	4.1	32	4.3	30	4.5	29	4.9	27	5.7	24	6.7	21
VOL (m^3/ha)	**350**	64	414	63	341	63	324	63	306	63	296	65	272	68	240	74	210
BA (m^2/ha)	**41**	2.9	44	3.5	36	3.7	34	4.0	32	4.1	31	4.5	29	5.3	25	6.2	22
VOL (m^3/ha)	**385**	65	450	63	370	63	350	63	330	63	319	64	292	66	256	71	221
BA (m^2/ha)	**45**	2.6	48	3.2	39	3.4	37	3.7	35	3.8	34	4.2	31	4.9	27	5.8	24
VOL (m^3/ha)	**420**	67	487	63	398	63	376	63	355	63	342	63	313	65	272	69	233
BA (m^2/ha)	**49**	2.4	51	3.0	42	3.2	40	3.4	38	3.5	36	3.9	33	4.5	29	5.5	25
VOL (m^3/ha)	**455**	69	524	64	427	63	403	63	380	63	366	63	333	64	288	67	246
BA (m^2/ha)	**53**	2.2	55	2.8	45	2.9	43	3.1	40	3.3	39	3.6	35	4.2	31	5.1	26
VOL (m^3/ha)	**490**	71	561	65	456	64	430	63	405	63	389	63	354	63	305	66	258
BA (m^2/ha)	**57**	2.1	59	2.6	48	2.8	46	2.9	43	3.1	41	3.4	38	4.0	32	4.8	27

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 20	PRESENT AGE 50						PRESENT HEIGHT 20.0 M						HEIGHT IN 5 YEARS 21.9 M			
VOL (m^3/ha)	280	58	338	60	283	61	270	62	256	63	249	65	231	70	207	77	186
BA (m^2/ha)	30	3.1	33	3.8	27	4.0	26	4.3	25	4.4	24	4.8	22	5.5	20	6.5	18
VOL (m^3/ha)	315	58	373	59	310	60	294	60	279	61	270	63	250	67	222	73	196
BA (m^2/ha)	33	2.8	36	3.4	30	3.6	29	3.9	27	4.0	26	4.4	24	5.1	21	6.0	19
VOL (m^3/ha)	350	59	409	58	337	59	320	59	302	60	292	61	269	65	237	70	207
BA (m^2/ha)	37	2.5	40	3.1	33	3.3	31	3.5	29	3.7	28	4.0	26	4.7	23	5.6	20
VOL (m^3/ha)	385	60	445	58	365	58	346	59	326	59	315	60	288	63	252	68	218
BA (m^2/ha)	41	2.3	43	2.9	35	3.0	33	3.2	32	3.4	30	3.7	28	4.3	24	5.2	21
VOL (m^3/ha)	420	61	481	59	394	58	372	58	351	58	338	59	309	61	268	66	230
BA (m^2/ha)	44	2.2	47	2.7	38	2.7	36	3.0	34	3.1	33	3.4	30	4.0	26	4.9	22
VOL (m^3/ha)	455	63	518	59	422	59	399	58	375	58	361	59	329	60	285	64	242
BA (m^2/ha)	48	2.0	50	2.5	41	2.6	39	2.8	36	2.9	35	3.2	32	3.8	28	4.6	23
VOL (m^3/ha)	490	65	555	60	451	59	425	59	400	59	385	58	350	59	301	62	255
BA (m^2/ha)	52	1.9	54	2.3	44	2.4	41	2.6	39	2.7	37	3.0	34	3.5	29	4.3	25
VOL (m^3/ha)	525	67	592	61	480	60	453	59	425	59	409	58	371	59	318	61	268
BA (m^2/ha)	55	1.7	57	2.2	46	2.3	44	2.4	41	2.6	40	2.8	36	3.3	31	4.1	26
VOL (m^3/ha)	560	69	629	63	509	61	480	60	450	60	433	59	392	58	335	60	281
BA (m^2/ha)	59	1.6	61	2.0	49	2.2	46	2.3	44	2.4	42	2.7	38	3.1	32	3.8	27
	SITE INDEX 20	PRESENT AGE 55						PRESENT HEIGHT 21.9 M						HEIGHT IN 5 YEARS 23.7 M			
VOL (m^3/ha)	280	52	332	54	277	55	263	56	250	57	242	59	224	63	200	70	178
BA (m^2/ha)	27	2.6	30	3.1	25	3.3	23	3.5	22	3.6	22	4.0	20	4.6	18	5.4	16
VOL (m^3/ha)	315	52	367	53	304	53	288	54	273	55	264	56	243	60	215	66	189
BA (m^2/ha)	30	2.3	33	2.8	27	3.0	26	3.2	24	3.3	24	3.6	22	4.2	19	5.0	17
VOL (m^3/ha)	350	53	403	52	331	53	314	53	296	53	286	55	262	58	230	63	200
BA (m^2/ha)	34	2.1	36	2.6	30	2.7	28	2.9	26	3.0	26	3.3	23	3.9	21	4.6	18
VOL (m^3/ha)	385	54	439	52	359	52	340	52	320	53	309	54	282	56	248	61	211
BA (m^2/ha)	37	1.9	39	2.4	32	2.5	30	2.7	29	2.8	28	3.1	25	3.6	22	4.3	19
VOL (m^3/ha)	420	55	475	53	387	52	366	52	344	52	332	53	302	55	262	59	223
BA (m^2/ha)	41	1.8	42	2.2	35	2.3	33	2.5	31	2.6	30	2.8	27	3.3	23	4.0	20
VOL (m^3/ha)	455	57	512	53	416	53	392	52	369	52	355	52	323	54	278	57	236
BA (m^2/ha)	44	1.6	46	2.0	37	2.2	35	2.3	33	2.4	32	2.6	29	3.1	25	3.8	21
VOL (m^3/ha)	490	58	548	54	445	53	419	53	394	52	379	52	344	53	295	56	248
BA (m^2/ha)	47	1.5	49	1.9	40	2.0	37	2.1	35	2.2	34	2.5	31	2.9	26	3.5	22
VOL (m^3/ha)	525	60	585	55	474	54	446	53	419	53	403	52	365	53	312	55	261
BA (m^2/ha)	51	1.4	52	1.8	42	1.9	40	2.0	37	2.1	36	2.3	33	2.7	28	3.3	23
VOL (m^3/ha)	560	62	622	56	503	55	473	54	444	53	427	53	386	52	329	54	274
BA (m^2/ha)	54	1.3	55	1.7	45	1.8	42	1.9	40	2.0	38	2.2	34	2.6	29	3.2	24
VOL (m^3/ha)	595	64	659	57	532	56	501	55	470	54	451	53	408	52	347	53	288
BA (m^2/ha)	57	1.3	59	1.6	47	1.7	45	1.8	42	1.9	40	2.1	36	2.5	31	3.0	26

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 20			PRESENT AGE 60				PRESENT HEIGHT 23.7 M						HEIGHT IN 5 YEARS 25.5 M			
VOL (m^3/ha)	315	44	359	43	294	44	278	44	263	45	254	46	232	49	203	53	176
BA (m^2/ha)	28	1.6	30	2.0	24	2.1	23	2.3	22	2.4	21	2.6	19	3.0	17	3.6	15
VOL (m^3/ha)	350	45	395	43	322	43	304	44	287	44	276	45	252	47	219	51	187
BA (m^2/ha)	31	1.5	33	1.8	27	1.9	25	2.1	24	2.2	23	2.4	21	2.8	18	3.4	16
VOL (m^3/ha)	385	46	431	44	350	43	331	43	311	43	299	44	272	46	235	49	199
BA (m^2/ha)	34	1.4	36	1.7	29	1.8	27	1.9	26	2.0	25	2.2	23	2.6	19	3.1	17
VOL (m^3/ha)	420	47	467	44	379	44	357	43	336	43	323	43	293	45	252	48	212
BA (m^2/ha)	37	1.2	39	1.5	31	1.6	30	1.8	28	1.8	27	2.0	24	2.4	21	2.9	18
VOL (m^3/ha)	455	49	504	45	408	44	384	44	361	44	346	43	314	44	268	46	225
BA (m^2/ha)	41	1.2	42	1.4	34	1.5	32	1.6	30	1.7	29	1.9	26	2.2	22	2.7	19
VOL (m^3/ha)	490	50	540	46	437	45	411	44	386	44	370	43	335	44	286	45	238
BA (m^2/ha)	44	1.1	45	1.3	36	1.4	34	1.5	32	1.6	31	1.8	28	2.1	24	2.5	20
VOL (m^3/ha)	525	52	577	47	466	46	438	45	411	45	394	44	356	43	303	45	251
BA (m^2/ha)	47	1.0	48	1.3	39	1.3	36	1.4	34	1.5	33	1.6	29	2.0	25	2.4	21
VOL (m^3/ha)	560	54	614	48	495	47	466	46	436	45	419	44	378	43	320	44	265
BA (m^2/ha)	50	0.9	51	1.2	41	1.3	39	1.3	36	1.4	35	1.6	31	1.8	27	2.3	22
VOL (m^3/ha)	595	56	651	50	524	48	493	47	462	46	443	45	399	43	338	44	278
BA (m^2/ha)	53	0.9	54	1.1	43	1.2	41	1.3	38	1.3	37	1.5	33	1.7	28	2.1	23
VOL (m^3/ha)	630	58	688	51	554	49	520	48	487	47	467	45	421	44	356	44	292
BA (m^2/ha)	56	0.8	57	1.1	46	1.1	43	1.2	40	1.2	39	1.4	35	1.7	29	2.0	24
VOL (m^3/ha)	665	60	725	52	583	51	548	49	513	48	492	46	443	44	374	43	306
BA (m^2/ha)	59	0.8	60	1.0	48	1.1	45	1.1	42	1.2	41	1.3	37	1.6	31	1.9	25

Skidding red pine tree lengths from Larose Forest, Prescott and Russell County. (W. Masters, 1959)

TABLE 3 (continued)

	Stand before thinning	0		20		25		30		33		40		50		60	
				Percent thinning													
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 22			PRESENT AGE 20				PRESENT HEIGHT 9.1 M						HEIGHT IN 5 YEARS 11.4 M			
VOL (m^3/ha)	**70**	79	149	83	138	85	136	86	133	87	132	90	129	94	126	98	122
BA (m^2/ha)	**17**	11.3	28	12.8	26	13.2	26	13.7	25	14.0	25	14.7	25	15.7	24	16.9	23
VOL (m^3/ha)	**105**	73	178	76	159	77	154	78	150	79	148	81	142	85	135	90	129
BA (m^2/ha)	**25**	8.7	34	10.2	30	10.7	29	11.1	29	11.4	28	12.2	27	13.4	26	14.8	25
VOL (m^3/ha)	**140**	73	213	73	184	74	177	74	170	75	167	76	158	80	147	84	137
BA (m^2/ha)	**33**	7.0	40	8.4	35	8.8	34	9.3	32	9.6	32	10.3	30	11.6	28	13.1	26
	SITE INDEX 22			PRESENT AGE 25				PRESENT HEIGHT 11.4 M						HEIGHT IN 5 YEARS 13.5 M			
VOL (m^3/ha)	**105**	78	183	83	166	85	162	87	158	88	156	91	151	95	145	101	140
BA (m^2/ha)	**20**	9.0	29	10.4	26	10.8	26	11.2	25	11.5	25	12.2	24	13.3	23	14.5	22
VOL (m^3/ha)	**140**	75	215	78	188	79	182	80	176	81	173	84	165	88	155	94	146
BA (m^2/ha)	**27**	7.3	34	8.6	30	9.0	29	9.5	28	9.8	27	10.5	26	11.6	25	13.0	23
VOL (m^3/ha)	**175**	74	249	75	213	75	205	76	197	77	192	79	181	83	167	88	155
BA (m^2/ha)	**33**	6.1	39	7.4	34	7.7	32	8.1	31	8.4	30	9.1	29	10.3	27	11.7	25
VOL (m^3/ha)	**210**	75	285	74	241	74	230	74	219	75	213	76	200	79	181	84	164
BA (m^2/ha)	**40**	5.3	45	6.4	38	6.7	36	7.1	35	7.4	34	8.0	32	9.1	29	10.5	26
	SITE INDEX 22			PRESENT AGE 30				PRESENT HEIGHT 13.5 M						HEIGHT IN 5 YEARS 15.7 M			
VOL (m^3/ha)	**140**	77	217	82	193	84	187	86	182	87	179	90	172	96	163	103	155
BA (m^2/ha)	**22**	7.3	30	8.6	26	9.0	26	9.4	25	9.7	24	10.3	23	11.4	22	12.6	21
VOL (m^3/ha)	**175**	74	249	78	216	79	209	80	201	81	197	84	187	89	174	96	162
BA (m^2/ha)	**28**	6.2	34	7.4	29	7.7	28	8.1	27	8.4	27	9.0	25	10.1	24	11.4	22
VOL (m^3/ha)	**210**	74	284	75	242	76	232	77	222	78	216	80	203	84	186	91	171
BA (m^2/ha)	**33**	5.3	38	6.4	33	6.8	31	7.1	30	7.4	29	8.0	28	9.1	25	10.4	23
VOL (m^3/ha)	**245**	74	319	74	269	74	256	75	244	75	237	77	221	81	200	86	181
BA (m^2/ha)	**39**	4.7	43	5.7	36	6.0	35	6.3	33	6.6	32	7.2	30	8.2	27	9.5	25
VOL (m^3/ha)	**280**	76	356	74	297	74	282	74	268	74	260	75	241	78	215	83	191
BA (m^2/ha)	**44**	4.2	48	5.1	40	5.4	38	5.7	36	5.9	35	6.5	33	7.4	29	8.7	26
	SITE INDEX 22			PRESENT AGE 35				PRESENT HEIGHT 15.7 M						HEIGHT IN 5 YEARS 17.8 M			
VOL (m^3/ha)	**175**	75	250	80	219	82	211	84	204	85	200	88	191	94	179	102	168
BA (m^2/ha)	**24**	6.1	30	7.2	26	7.5	25	7.9	24	8.2	24	8.8	23	9.7	21	10.9	20
VOL (m^3/ha)	**210**	73	283	76	243	77	233	79	224	80	219	83	207	88	190	96	176
BA (m^2/ha)	**28**	5.2	34	6.3	29	6.6	28	7.0	27	7.2	26	7.8	25	8.8	23	10.0	21
VOL (m^3/ha)	**245**	73	318	74	269	75	257	76	246	77	239	79	224	84	203	91	185
BA (m^2/ha)	**33**	4.6	38	5.6	32	5.9	31	6.2	29	6.4	29	7.0	27	8.0	24	9.2	22
VOL (m^3/ha)	**280**	73	353	73	296	73	282	74	268	75	260	76	242	80	217	87	195
BA (m^2/ha)	**38**	4.1	42	5.0	35	5.3	34	5.6	32	5.8	31	6.3	29	7.3	26	8.5	23
VOL (m^3/ha)	**315**	74	389	73	323	73	307	73	292	73	282	74	261	78	232	83	206
BA (m^2/ha)	**43**	3.7	46	4.5	38	4.8	37	5.1	35	5.3	34	5.8	31	6.7	28	7.8	25
VOL (m^3/ha)	**350**	76	426	73	352	73	334	73	316	73	305	73	281	76	248	80	217
BA (m^2/ha)	**47**	3.4	51	4.1	42	4.4	40	4.6	38	4.8	36	5.3	33	6.2	30	7.3	26
VOL (m^3/ha)	**385**	79	464	74	381	73	360	73	340	73	329	73	301	74	264	78	229
BA (m^2/ha)	**52**	3.1	55	3.8	45	4.0	43	4.3	41	4.4	39	4.9	36	5.7	31	6.8	27

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 22	PRESENT AGE 40						PRESENT HEIGHT 17.8 M						HEIGHT IN 5 YEARS 19.9 M			
VOL (m^3/ha)	**210**	72	282	76	243	78	234	80	225	81	220	84	208	90	192	98	179
BA (m^2/ha)	**25**	5.0	30	6.0	26	6.3	25	6.6	24	6.8	23	7.4	22	8.3	21	9.4	19
VOL (m^3/ha)	**245**	71	316	73	268	75	257	76	246	77	239	80	225	85	205	93	187
BA (m^2/ha)	**29**	4.4	34	5.3	29	5.6	27	5.9	26	6.1	25	6.6	24	7.5	22	8.6	20
VOL (m^3/ha)	**280**	70	350	71	294	72	281	73	268	74	260	77	242	81	218	89	197
BA (m^2/ha)	**33**	3.9	37	4.8	31	5.0	30	5.3	28	5.5	28	6.0	26	6.9	23	8.0	21
VOL (m^3/ha)	**315**	71	386	70	321	71	306	72	290	72	281	74	261	78	233	85	207
BA (m^2/ha)	**37**	3.5	41	4.3	34	4.6	33	4.8	31	5.0	30	5.5	28	6.3	25	7.4	22
VOL (m^3/ha)	**350**	72	422	70	349	70	331	71	314	71	304	72	280	76	248	82	218
BA (m^2/ha)	**42**	3.2	45	3.9	37	4.2	35	4.4	33	4.6	32	5.0	30	5.8	26	6.9	23
VOL (m^3/ha)	**385**	73	458	70	377	70	357	70	338	70	326	71	300	74	263	79	229
BA (m^2/ha)	**46**	2.9	49	3.6	40	3.8	38	4.1	36	4.2	35	4.7	32	5.4	28	6.4	24
VOL (m^3/ha)	**420**	75	495	71	406	71	384	70	362	70	350	70	320	72	279	77	241
BA (m^2/ha)	**50**	2.7	53	3.3	43	3.5	41	3.8	39	3.9	37	4.3	34	5.1	30	6.0	26
VOL (m^3/ha)	**455**	78	533	72	435	71	411	71	387	70	373	70	341	71	296	75	253
BA (m^2/ha)	**54**	2.5	57	3.1	46	3.3	44	3.5	41	3.6	40	4.0	36	4.7	31	5.7	27
	SITE INDEX 22	PRESENT AGE 45						PRESENT HEIGHT 19.9 M						HEIGHT IN 5 YEARS 22.0 M			
VOL (m^3/ha)	**280**	67	347	69	291	70	278	71	265	72	257	74	240	80	217	87	196
BA (m^2/ha)	**30**	3.6	33	4.3	28	4.6	27	4.8	26	5.0	25	5.5	23	6.3	21	7.3	19
VOL (m^3/ha)	**315**	66	381	67	318	68	303	69	288	70	279	72	258	76	231	83	206
BA (m^2/ha)	**33**	3.2	37	3.9	31	4.2	29	4.4	28	4.6	27	5.0	25	5.8	22	6.7	20
VOL (m^3/ha)	**350**	67	417	67	345	67	328	67	311	68	301	70	277	74	246	80	216
BA (m^2/ha)	**37**	2.9	40	3.6	33	3.8	32	4.0	30	4.2	29	4.6	27	5.3	24	6.3	21
VOL (m^3/ha)	**385**	68	453	66	373	66	354	67	334	67	323	68	297	71	261	77	227
BA (m^2/ha)	**41**	2.7	44	3.3	36	3.5	34	3.7	32	3.9	31	4.2	29	4.9	25	5.9	22
VOL (m^3/ha)	**420**	70	490	67	402	66	380	66	359	67	346	67	317	70	277	75	239
BA (m^2/ha)	**45**	2.5	47	3.0	39	3.2	37	3.4	34	3.6	33	3.9	30	4.6	27	5.5	23
VOL (m^3/ha)	**455**	71	526	67	430	67	407	66	383	66	369	67	337	68	293	73	251
BA (m^2/ha)	**48**	2.3	51	2.8	41	3.0	39	3.2	37	3.3	35	3.7	32	4.3	28	5.2	24
VOL (m^3/ha)	**490**	73	563	68	459	67	433	67	408	67	393	66	358	68	310	71	263
BA (m^2/ha)	**52**	2.1	54	2.6	44	2.8	42	3.0	39	3.1	38	3.4	34	4.0	30	4.9	25
VOL (m^3/ha)	**525**	76	601	70	488	68	461	67	433	67	417	66	379	67	326	70	276
BA (m^2/ha)	**56**	2.0	58	2.5	47	2.6	44	2.8	42	2.9	40	3.2	36	3.8	31	4.6	27
VOL (m^3/ha)	**560**	78	638	71	518	70	488	68	459	68	441	67	400	67	344	69	289
BA (m^2/ha)	**59**	1.9	61	2.3	50	2.5	47	2.6	44	2.8	42	3.1	38	3.6	33	4.4	28

TABLE 3 (continued)

	Stand before thinning	0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 22			PRESENT AGE 50				PRESENT HEIGHT 22.0 M						HEIGHT IN 5 YEARS 24.0 M			
VOL (m^3/ha)	**315**	61	376	62	312	62	297	63	282	64	273	66	253	71	225	78	200
BA (m^2/ha)	**30**	2.7	33	3.4	27	3.6	26	3.8	25	3.9	24	4.3	22	4.9	20	5.8	18
VOL (m^3/ha)	**350**	61	411	61	340	61	322	62	305	63	295	64	272	68	240	74	211
BA (m^2/ha)	**34**	2.5	36	3.1	30	3.2	28	3.4	27	3.6	26	3.9	24	4.6	21	5.4	19
VOL (m^3/ha)	**385**	62	447	61	367	61	348	61	329	62	317	63	291	66	255	72	222
BA (m^2/ha)	**37**	2.3	39	2.8	32	3.0	31	3.2	29	3.3	28	3.6	26	4.2	22	5.0	20
VOL (m^3/ha)	**420**	63	483	61	396	61	374	61	353	61	340	62	311	64	271	69	234
BA (m^2/ha)	**40**	2.1	42	2.6	35	2.8	33	2.9	31	3.1	30	3.4	27	3.9	24	4.7	21
VOL (m^3/ha)	**455**	65	520	61	424	61	401	61	377	61	364	61	332	63	288	67	246
BA (m^2/ha)	**44**	2.0	46	2.4	37	2.6	35	2.7	33	2.8	32	3.1	29	3.7	25	4.4	22
VOL (m^3/ha)	**490**	66	556	62	453	61	427	61	402	61	387	61	352	62	304	66	258
BA (m^2/ha)	**47**	1.8	49	2.3	40	2.4	38	2.6	35	2.7	34	2.9	31	3.5	27	4.2	23
VOL (m^3/ha)	**525**	68	593	63	482	62	454	61	427	61	411	61	373	61	321	64	271
BA (m^2/ha)	**50**	1.7	52	2.1	42	2.2	40	2.4	38	2.5	36	2.8	33	3.3	28	4.0	24
VOL (m^3/ha)	**560**	70	630	64	511	63	482	62	452	62	435	61	394	61	338	63	284
BA (m^2/ha)	**54**	1.6	55	2.0	45	2.1	42	2.3	40	2.4	38	2.6	35	3.1	30	3.7	25
VOL (m^3/ha)	**595**	73	668	66	540	64	509	63	478	62	459	61	416	61	355	62	297
BA (m^2/ha)	**57**	1.5	59	1.9	47	2.0	45	2.1	42	2.2	40	2.5	37	2.9	31	3.6	26
VOL (m^3/ha)	**630**	75	705	67	570	65	536	64	503	63	483	62	437	61	373	62	310
BA (m^2/ha)	**60**	1.4	62	1.8	50	1.9	47	2.0	44	2.1	42	2.3	38	2.8	33	3.4	27
	SITE INDEX 22			PRESENT AGE 55				PRESENT HEIGHT 24.0 M						HEIGHT IN 5 YEARS 26.1 M			
VOL (m^3/ha)	**350**	53	403	52	331	53	314	53	296	54	286	55	262	58	230	63	200
BA (m^2/ha)	**31**	1.9	33	2.3	27	2.5	25	2.6	24	2.8	23	3.0	21	3.5	19	4.2	16
VOL (m^3/ha)	**385**	54	439	52	359	52	340	53	320	53	309	54	282	56	246	61	211
BA (m^2/ha)	**34**	1.7	36	2.2	29	2.3	27	2.4	26	2.5	25	2.8	23	3.3	20	3.9	17
VOL (m^3/ha)	**420**	55	475	53	387	52	366	52	345	52	332	53	303	55	262	59	223
BA (m^2/ha)	**37**	1.6	38	2.0	31	2.1	30	2.3	28	2.3	27	2.6	24	3.0	21	3.7	18
VOL (m^3/ha)	**455**	57	512	53	416	53	392	52	369	52	355	53	323	54	278	57	236
BA (m^2/ha)	**40**	1.5	41	1.8	34	2.0	32	2.1	30	2.2	29	2.4	26	2.8	23	3.4	19
VOL (m^3/ha)	**490**	58	548	54	445	53	419	53	394	53	379	52	344	53	295	56	248
BA (m^2/ha)	**43**	1.4	44	1.7	36	1.8	34	2.0	32	2.0	31	2.3	28	2.7	24	3.2	20
VOL (m^3/ha)	**525**	60	585	55	474	54	446	53	419	53	403	52	365	53	312	55	261
BA (m^2/ha)	**46**	1.3	47	1.6	38	1.7	36	1.8	34	1.9	33	2.1	30	2.5	25	3.0	21
VOL (m^3/ha)	**560**	62	622	56	503	55	474	54	444	54	427	53	386	52	329	54	275
BA (m^2/ha)	**49**	1.2	50	1.5	41	1.6	38	1.7	36	1.8	35	2.0	31	2.4	27	2.9	22
VOL (m^3/ha)	**595**	64	659	58	532	56	501	55	470	54	451	53	408	52	347	53	288
BA (m^2/ha)	**52**	1.2	53	1.4	43	1.5	41	1.6	38	1.7	36	1.9	33	2.2	28	2.7	23
VOL (m^3/ha)	**630**	66	696	59	562	57	528	56	495	55	475	54	429	52	364	53	301
BA (m^2/ha)	**55**	1.1	56	1.4	45	1.4	43	1.5	40	1.6	38	1.8	35	2.1	29	2.6	24
VOL (m^3/ha)	**665**	69	734	60	591	59	556	57	521	56	500	54	451	53	382	53	315
BA (m^2/ha)	**58**	1.0	59	1.3	48	1.4	45	1.5	42	1.5	40	1.7	36	2.0	31	2.5	26
VOL (m^3/ha)	**700**	71	771	62	621	60	584	58	546	57	524	55	473	53	400	52	329
BA (m^2/ha)	**61**	1.0	62	1.2	50	1.3	47	1.4	44	1.5	42	1.6	38	1.9	32	2.4	27

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 22	PRESENT AGE 60						PRESENT HEIGHT 26.1 M						HEIGHT IN 5 YEARS 28.0 M			
VOL (m^3/ha)	**385**	43	428	40	347	40	327	40	307	40	296	40	268	41	230	43	194
BA (m^2/ha)	**31**	1.0	32	1.3	26	1.4	25	1.4	23	1.5	22	1.7	20	2.0	17	2.4	15
VOL (m^3/ha)	**420**	45	465	41	376	41	354	40	332	40	319	40	289	40	247	42	206
BA (m^2/ha)	**34**	0.9	35	1.2	28	1.3	27	1.3	25	1.4	24	1.5	22	1.8	19	2.2	16
VOL (m^3/ha)	**455**	46	501	42	405	41	381	41	357	40	343	40	310	40	264	41	220
BA (m^2/ha)	**37**	0.9	38	1.1	30	1.2	29	1.2	27	1.3	26	1.4	23	1.7	20	2.1	16
VOL (m^3/ha)	**490**	48	538	43	434	42	408	41	383	41	367	40	332	40	282	41	233
BA (m^2/ha)	**40**	0.8	40	1.0	33	1.1	31	1.2	29	1.2	28	1.3	25	1.6	21	1.9	17
VOL (m^3/ha)	**525**	50	575	45	463	43	436	42	408	42	391	41	353	40	299	40	246
BA (m^2/ha)	**42**	0.8	43	1.0	35	1.0	33	1.1	31	1.1	29	1.3	27	1.5	22	1.8	19
VOL (m^3/ha)	**560**	52	612	46	493	45	463	43	433	43	416	41	375	40	317	40	260
BA (m^2/ha)	**45**	0.7	46	0.9	37	1.0	35	1.0	33	1.1	31	1.2	28	1.4	24	1.7	20
VOL (m^3/ha)	**595**	54	649	47	522	46	491	44	459	44	440	42	396	40	335	40	274
BA (m^2/ha)	**48**	0.7	49	0.8	39	0.9	37	1.0	34	1.0	33	1.1	30	1.3	25	1.6	21
VOL (m^3/ha)	**630**	57	687	49	552	47	518	46	485	45	465	43	418	40	352	40	288
BA (m^2/ha)	**51**	0.6	52	0.8	41	0.8	39	0.9	36	0.9	35	1.1	31	1.3	26	1.6	22
VOL (m^3/ha)	**665**	59	724	51	581	49	546	47	510	46	489	44	440	41	370	40	302
BA (m^2/ha)	**54**	0.6	54	0.8	44	0.8	41	0.9	38	0.9	37	1.0	33	1.2	28	1.5	23
VOL (m^3/ha)	**700**	61	761	52	611	50	574	48	536	47	514	45	462	42	389	40	316
BA (m^2/ha)	**57**	0.6	57	0.7	46	0.8	43	0.8	40	0.9	39	1.0	35	1.1	29	1.4	24
VOL (m^3/ha)	**735**	63	798	54	641	52	601	49	562	48	539	46	484	42	407	40	330
BA (m^2/ha)	**59**	0.6	60	0.7	48	0.7	45	0.8	42	0.8	40	0.9	36	1.1	31	1.3	25
VOL (m^3/ha)	**770**	66	836	56	670	53	629	51	588	50	563	47	506	43	425	40	345
BA (m^2/ha)	**62**	0.5	63	0.7	50	0.7	47	0.7	44	0.8	42	0.9	38	1.0	32	1.3	26

Red pine pulpwood from second thinning stacked along road in Victoria County Forest (W. Masters, 1964)

TABLE 3 (continued)

Peeled and stacked red pine bolts representing 4000 m³ of pulpwood thinned from Stony Tract, Simcoe County Forest. (T. Jenkins, 1969)

		Percent thinning																	
	Stand before thinning	0		20		25		30		33		40		50		60			
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld		
	SITE INDEX 24			PRESENT AGE 20				PRESENT HEIGHT 10.0 M						HEIGHT IN 5 YEARS 12.4 M					
VOL (m³/ha)	**105**	81	186	84	167	86	163	87	159	88	156	90	151	95	144	100	138		
BA (m²/ha)	**23**	9.3	32	10.8	29	11.2	28	11.7	28	12.0	27	12.7	26	13.9	25	15.3	24		
VOL (m³/ha)	**140**	79	219	80	191	81	184	82	178	83	174	85	166	88	155	93	146		
BA (m²/ha)	**30**	7.5	38	8.9	33	9.3	32	9.8	31	10.1	30	10.9	29	12.1	27	13.6	25		
VOL (m³/ha)	**175**	80	255	79	218	79	209	79	200	80	195	81	184	84	168	88	155		
BA (m²/ha)	**38**	6.3	44	7.6	38	8.0	36	8.4	35	8.7	34	9.4	32	10.6	29	12.2	27		
VOL (m³/ha)	**210**	83	293	80	247	79	235	79	224	79	218	79	203	81	183	85	165		
BA (m²/ha)	**45**	5.4	51	6.5	43	6.9	41	7.3	39	7.6	38	8.2	35	9.4	32	10.9	29		
	SITE INDEX 24			PRESENT AGE 25				PRESENT HEIGHT 12.4 M						HEIGHT IN 5 YEARS 14.8 M					
VOL (m³/ha)	**140**	82	222	86	196	87	191	89	185	90	182	93	174	98	165	104	157		
BA (m²/ha)	**24**	7.7	32	9.1	28	9.5	28	9.9	27	10.2	26	10.9	25	12.0	24	13.4	23		
VOL (m³/ha)	**175**	80	255	82	221	83	213	84	205	85	200	87	190	92	176	98	165		
BA (m²/ha)	**30**	6.5	37	7.8	32	8.2	31	8.6	30	8.9	29	9.5	28	10.7	26	12.1	24		
VOL (m³/ha)	**210**	80	290	80	247	81	237	81	227	82	221	84	207	87	189	93	174		
BA (m²/ha)	**36**	5.6	42	6.8	36	7.1	34	7.5	33	7.8	32	8.4	30	9.6	27	11.0	25		
VOL (m³/ha)	**245**	82	327	80	275	80	262	80	250	80	243	81	226	84	204	89	184		
BA (m²/ha)	**42**	4.9	47	6.0	40	6.3	38	6.7	36	6.9	35	7.5	33	8.6	29	10.0	27		
VOL (m³/ha)	**280**	85	365	81	304	80	289	80	274	80	266	80	246	82	219	86	195		
BA (m²/ha)	**48**	4.4	53	5.3	44	5.6	42	6.0	40	6.2	38	6.8	36	7.9	32	9.2	28		

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 24			PRESENT AGE 30				PRESENT HEIGHT 14.8 M				HEIGHT IN 5 YEARS 17.1 M					
VOL (m^3/ha)	**175**	81	256	85	224	87	217	89	209	90	205	93	196	99	183	106	173
BA (m^2/ha)	**25**	6.5	32	7.7	28	8.1	27	8.5	26	8.7	26	9.4	24	10.4	23	11.7	22
VOL (m^3/ha)	**210**	80	290	82	249	83	239	84	230	85	224	88	212	93	195	100	181
BA (m^2/ha)	**30**	5.6	36	6.8	31	7.1	30	7.5	29	7.7	28	8.4	26	9.4	24	10.7	23
VOL (m^3/ha)	**245**	80	325	80	275	81	263	82	251	82	245	85	229	89	208	96	190
BA (m^2/ha)	**35**	4.9	40	6.0	34	6.3	33	6.7	31	6.9	30	7.5	28	8.5	26	9.8	24
VOL (m^3/ha)	**280**	81	361	80	302	80	288	80	274	81	266	82	248	86	223	92	200
BA (m^2/ha)	**40**	4.4	45	5.4	38	5.7	36	6.0	34	6.2	33	6.8	31	7.8	28	9.1	25
VOL (m^3/ha)	**315**	83	398	80	331	80	314	80	298	80	289	81	267	83	238	88	211
BA (m^2/ha)	**45**	4.0	49	4.9	41	5.1	39	5.4	37	5.7	36	6.2	33	7.2	30	8.4	26
VOL (m^3/ha)	**350**	86	436	81	360	80	341	80	323	80	312	80	287	82	254	86	222
BA (m^2/ha)	**50**	3.6	54	4.4	45	4.7	42	5.0	40	5.2	39	5.7	36	6.6	32	7.8	28
	SITE INDEX 24			PRESENT AGE 35				PRESENT HEIGHT 17.1 M				HEIGHT IN 5 YEARS 19.4 M					
VOL (m^3/ha)	**210**	79	289	83	250	85	241	87	232	88	227	91	215	97	199	105	186
BA (m^2/ha)	**26**	5.5	32	6.5	27	6.9	26	7.2	25	7.5	25	8.0	23	9.0	22	10.2	20
VOL (m^3/ha)	**245**	78	323	80	275	82	264	83	253	84	246	87	231	92	212	100	194
BA (m^2/ha)	**30**	4.8	35	5.8	30	6.1	29	6.5	28	6.7	27	7.2	25	8.2	23	9.4	21
VOL (m^3/ha)	**280**	78	358	79	301	79	288	80	275	81	267	83	249	88	225	95	204
BA (m^2/ha)	**35**	4.3	39	5.2	33	5.5	31	5.8	30	6.0	29	6.6	27	7.5	25	8.7	22
VOL (m^3/ha)	**315**	79	394	78	329	78	313	79	298	79	288	81	268	85	240	92	214
BA (m^2/ha)	**39**	3.9	43	4.7	36	5.0	34	5.3	32	5.5	31	6.0	29	6.9	26	8.1	23
VOL (m^3/ha)	**350**	80	430	78	357	78	339	78	321	78	311	79	287	83	255	88	225
BA (m^2/ha)	**43**	3.5	47	4.3	39	4.6	37	4.9	35	5.0	34	5.5	31	6.4	28	7.5	25
VOL (m^3/ha)	**385**	82	467	79	385	78	365	78	346	78	334	78	307	81	270	86	236
BA (m^2/ha)	**48**	3.2	51	4.0	42	4.2	40	4.5	38	4.6	36	5.1	33	5.9	29	7.0	26
VOL (m^3/ha)	**420**	85	505	80	414	79	392	78	370	78	357	78	328	80	286	84	248
BA (m^2/ha)	**52**	3.0	55	3.7	45	3.9	43	4.1	40	4.3	39	4.7	36	5.5	31	6.6	27
	SITE INDEX 24			PRESENT AGE 40				PRESENT HEIGHT 19.4 M				HEIGHT IN 5 YEARS 21.7 M					
VOL (m^3/ha)	**245**	76	321	79	274	81	263	82	252	84	246	87	232	93	213	101	196
BA (m^2/ha)	**27**	4.5	31	5.4	27	5.7	26	6.0	25	6.2	24	6.8	23	7.6	21	8.7	19
VOL (m^3/ha)	**280**	75	355	77	300	78	286	79	273	80	266	83	249	89	226	96	205
BA (m^2/ha)	**30**	4.0	35	4.9	29	5.2	28	5.4	27	5.6	26	6.1	24	7.0	22	8.1	20
VOL (m^3/ha)	**315**	75	390	75	326	76	311	77	296	78	287	80	267	85	239	92	215
BA (m^2/ha)	**34**	3.6	38	4.4	32	4.7	30	5.0	29	5.1	28	5.6	26	6.5	23	7.5	21
VOL (m^3/ha)	**350**	76	426	75	354	75	336	76	319	76	309	78	286	82	254	89	225
BA (m^2/ha)	**38**	3.3	41	4.0	34	4.3	33	4.5	31	4.7	30	5.2	28	6.0	25	7.0	22
VOL (m^3/ha)	**385**	77	462	75	382	75	362	75	343	75	331	76	305	80	269	86	236
BA (m^2/ha)	**42**	3.0	45	3.7	37	3.9	35	4.2	33	4.4	32	4.8	30	5.6	26	6.6	23
VOL (m^3/ha)	**420**	79	499	75	410	75	388	75	367	75	354	75	325	78	285	83	248
BA (m^2/ha)	**46**	2.8	48	3.4	40	3.6	38	3.9	36	4.0	34	4.4	32	5.2	28	6.2	24
VOL (m^3/ha)	**455**	81	536	76	439	75	415	75	392	75	378	75	346	77	301	81	260
BA (m^2/ha)	**49**	2.6	52	3.2	43	3.4	40	3.6	38	3.8	37	4.2	34	4.9	29	5.8	25
VOL (m^3/ha)	**490**	83	573	77	468	76	442	75	417	75	401	75	366	76	318	79	272
BA (m^2/ha)	**53**	2.4	56	3.0	45	3.2	43	3.4	41	3.5	39	3.9	36	4.6	31	5.5	26
VOL (m^3/ha)	**525**	85	610	78	497	77	469	76	442	76	425	75	387	75	335	78	284
BA (m^2/ha)	**57**	2.3	59	2.8	48	3.0	46	3.2	43	3.3	41	3.7	38	4.3	33	5.2	28

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 24			PRESENT AGE 45				PRESENT HEIGHT 21.7 M						HEIGHT IN 5 YEARS 24.0 M			
VOL (m^3/ha)	**315**	70	385	71	322	72	307	73	292	74	283	76	263	82	236	89	211
BA (m^2/ha)	**31**	3.2	34	3.9	28	4.2	27	4.4	26	4.6	25	5.0	23	5.7	21	6.7	19
VOL (m^3/ha)	**350**	70	420	70	349	71	332	71	315	72	305	74	282	78	250	85	222
BA (m^2/ha)	**34**	2.9	37	3.6	31	3.8	29	4.0	28	4.2	27	4.6	25	5.3	22	6.2	20
VOL (m^3/ha)	**385**	71	456	70	376	70	357	70	338	71	327	72	301	76	266	82	233
BA (m^2/ha)	**37**	2.7	40	3.3	33	3.5	31	3.7	30	3.9	29	4.2	26	4.9	23	5.8	21
VOL (m^3/ha)	**420**	72	492	70	405	70	383	70	362	70	349	71	321	74	281	80	244
BA (m^2/ha)	**41**	2.4	43	3.1	36	3.2	34	3.4	32	3.6	31	4.0	28	4.6	25	5.5	22
VOL (m^3/ha)	**455**	74	529	70	433	70	410	70	386	70	373	70	341	73	297	78	256
BA (m^2/ha)	**44**	2.3	46	2.8	38	3.0	36	3.2	34	3.3	33	3.7	30	4.3	26	5.2	23
VOL (m^3/ha)	**490**	76	566	71	462	70	436	70	411	70	396	70	361	71	313	76	268
BA (m^2/ha)	**48**	2.1	50	2.7	41	2.8	38	3.0	36	3.1	35	3.5	32	4.1	28	4.9	24
VOL (m^3/ha)	**525**	78	603	72	491	71	463	70	436	70	420	70	382	71	330	74	281
BA (m^2/ha)	**51**	2.0	53	2.5	43	2.6	41	2.8	38	2.9	37	3.3	34	3.8	29	4.6	25
VOL (m^3/ha)	**560**	80	640	73	520	72	491	71	461	70	444	70	403	70	347	73	293
BA (m^2/ha)	**54**	1.9	56	2.3	46	2.5	43	2.7	41	2.8	39	3.1	35	3.6	31	4.4	26
VOL (m^3/ha)	**595**	82	677	75	550	73	518	72	487	71	468	70	425	70	364	72	306
BA (m^2/ha)	**58**	1.8	60	2.2	48	2.4	46	2.5	43	2.6	41	2.9	37	3.4	32	4.2	27
VOL (m^3/ha)	**630**	85	715	76	579	75	546	73	512	72	492	71	446	70	382	71	320
BA (m^2/ha)	**61**	1.7	63	2.1	51	2.2	48	2.4	45	2.5	43	2.8	39	3.3	34	4.0	28
	SITE INDEX 24			PRESENT AGE 50				PRESENT HEIGHT 24.0 M						HEIGHT IN 5 YEARS 26.2 M			
VOL (m^3/ha)	**350**	62	412	63	341	63	324	64	307	64	297	66	274	70	242	77	213
BA (m^2/ha)	**31**	2.4	33	2.9	27	3.1	26	3.3	25	3.4	24	3.8	22	4.4	19	5.2	17
VOL (m^3/ha)	**385**	63	448	62	369	62	350	63	330	63	319	65	293	68	258	74	224
BA (m^2/ha)	**34**	2.2	36	2.7	30	2.9	28	3.0	27	3.2	26	3.5	24	4.1	21	4.8	18
VOL (m^3/ha)	**420**	64	484	62	397	62	376	62	354	62	342	63	313	66	273	72	236
BA (m^2/ha)	**37**	2.0	39	2.5	32	2.6	30	2.8	29	2.9	27	3.2	25	3.8	22	4.5	19
VOL (m^3/ha)	**455**	66	521	63	425	62	402	62	379	62	365	63	333	65	289	69	248
BA (m^2/ha)	**40**	1.9	42	2.3	34	2.5	32	2.6	30	2.7	29	3.0	27	3.5	23	4.2	20
VOL (m^3/ha)	**490**	67	557	63	454	63	429	62	403	62	388	62	354	64	306	68	260
BA (m^2/ha)	**43**	1.8	45	2.2	37	2.3	34	2.5	32	2.6	31	2.8	28	3.3	25	4.0	21
VOL (m^3/ha)	**525**	69	594	64	483	63	456	63	428	62	412	62	375	63	323	66	273
BA (m^2/ha)	**46**	1.6	48	2.0	39	2.2	37	2.3	34	2.4	33	2.7	30	3.1	26	3.8	22
VOL (m^3/ha)	**560**	71	631	65	512	64	483	63	453	63	436	62	396	63	340	65	286
BA (m^2/ha)	**49**	1.5	51	1.9	41	2.0	39	2.2	36	2.3	35	2.5	32	3.0	27	3.6	23
VOL (m^3/ha)	**595**	73	668	67	541	65	510	64	479	63	460	62	417	62	357	64	299
BA (m^2/ha)	**52**	1.5	54	1.8	44	1.9	41	2.0	38	2.1	37	2.4	34	2.8	29	3.4	24
VOL (m^3/ha)	**630**	76	706	68	571	66	537	65	504	64	484	63	439	62	374	64	312
BA (m^2/ha)	**55**	1.4	57	1.7	46	1.8	43	1.9	41	2.0	39	2.2	35	2.7	30	3.2	25
VOL (m^3/ha)	**665**	78	743	70	600	68	565	66	530	65	509	63	460	62	392	63	325
BA (m^2/ha)	**58**	1.3	60	1.6	48	1.7	45	1.8	43	1.9	41	2.1	37	2.5	31	3.1	26
VOL (m^3/ha)	**700**	81	781	71	630	69	593	67	555	66	533	64	482	62	409	63	339
BA (m^2/ha)	**61**	1.2	63	1.5	51	1.6	48	1.8	45	1.8	43	2.0	39	2.4	33	3.0	27

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 24			PRESENT AGE 55				PRESENT HEIGHT 26.2 M				HEIGHT IN 5 YEARS 28.4 M					
VOL (m^3/ha)	**385**	53	438	51	358	51	338	51	319	51	307	52	281	54	244	59	209
BA (m^2/ha)	**31**	1.5	32	1.9	27	2.0	25	2.1	24	2.2	23	2.4	21	2.8	18	3.4	15
VOL (m^3/ha)	**420**	54	474	51	386	51	364	51	343	51	330	51	301	53	260	57	221
BA (m^2/ha)	**34**	1.4	35	1.7	29	1.8	27	2.0	25	2.0	24	2.2	22	2.6	19	3.2	16
VOL (m^3/ha)	**455**	56	511	52	415	51	391	51	368	51	354	51	322	52	277	55	234
BA (m^2/ha)	**37**	1.3	38	1.6	31	1.7	29	1.8	27	1.9	26	2.1	24	2.5	20	3.0	17
VOL (m^3/ha)	**490**	57	547	53	444	52	418	51	393	51	377	51	342	51	293	54	246
BA (m^2/ha)	**39**	1.2	41	1.5	33	1.6	31	1.7	29	1.8	28	2.0	25	2.3	22	2.8	18
VOL (m^3/ha)	**525**	59	584	54	473	53	445	52	418	52	401	51	364	51	311	53	259
BA (m^2/ha)	**42**	1.1	43	1.4	35	1.5	33	1.6	31	1.7	30	1.8	27	2.2	23	2.6	19
VOL (m^3/ha)	**560**	61	621	55	502	54	472	53	443	52	426	51	385	51	328	52	273
BA (m^2/ha)	**45**	1.1	46	1.3	37	1.4	35	1.5	33	1.6	32	1.7	29	2.0	24	2.5	20
VOL (m^3/ha)	**595**	63	658	57	531	55	500	54	469	53	450	52	406	51	345	52	286
BA (m^2/ha)	**48**	1.0	49	1.2	39	1.3	37	1.4	35	1.5	33	1.6	30	1.9	26	2.4	21
VOL (m^3/ha)	**630**	66	696	58	561	56	527	55	494	54	474	52	428	51	363	51	300
BA (m^2/ha)	**51**	0.9	52	1.2	42	1.3	39	1.3	37	1.4	35	1.5	32	1.8	27	2.3	22
VOL (m^3/ha)	**665**	68	733	60	590	58	555	56	520	55	499	53	450	51	381	51	313
BA (m^2/ha)	**53**	0.9	54	1.1	44	1.2	41	1.3	39	1.3	37	1.5	33	1.7	28	2.2	23
VOL (m^3/ha)	**700**	70	770	61	620	59	583	57	545	56	523	54	472	52	399	51	327
BA (m^2/ha)	**56**	0.9	57	1.1	46	1.1	43	1.2	40	1.3	39	1.4	35	1.7	30	2.1	24
VOL (m^3/ha)	**735**	73	808	63	650	61	610	59	571	57	548	55	493	52	417	51	341
BA (m^2/ha)	**59**	0.8	60	1.0	48	1.1	45	1.2	42	1.2	41	1.3	37	1.6	31	2.0	25
VOL (m^3/ha)	**770**	75	845	65	679	62	638	60	597	59	573	56	515	53	435	51	355
BA (m^2/ha)	**62**	0.8	63	1.0	50	1.0	47	1.1	44	1.1	42	1.3	38	1.5	32	1.9	26
	SITE INDEX 24			PRESENT AGE 60				PRESENT HEIGHT 28.4 M				HEIGHT IN 5 YEARS 30.6 M					
VOL (m^3/ha)	**420**	40	460	36	371	35	348	34	326	33	313	33	282	32	239	32	197
BA (m^2/ha)	**31**	0.6	32	0.7	25	0.8	24	0.8	22	0.8	22	0.9	19	1.1	16	1.4	13
VOL (m^3/ha)	**455**	42	497	37	400	36	376	35	352	34	337	33	304	32	257	32	210
BA (m^2/ha)	**34**	0.5	34	0.7	27	0.7	26	0.7	24	0.8	23	0.9	21	1.0	18	1.3	14
VOL (m^3/ha)	**490**	44	534	39	429	37	403	36	377	35	362	34	326	32	274	32	224
BA (m^2/ha)	**36**	0.5	37	0.6	30	0.7	28	0.7	26	0.7	25	0.8	22	1.0	19	1.2	15
VOL (m^3/ha)	**525**	47	572	40	459	39	431	37	403	37	386	35	347	33	292	32	238
BA (m^2/ha)	**39**	0.5	39	0.6	32	0.6	30	0.7	28	0.7	27	0.8	24	0.9	20	1.1	16
VOL (m^3/ha)	**560**	49	609	42	489	40	459	39	429	38	411	36	369	33	310	32	252
BA (m^2/ha)	**41**	0.4	42	0.5	34	0.6	32	0.6	29	0.6	28	0.7	25	0.8	21	1.1	17
VOL (m^3/ha)	**595**	51	646	44	518	42	486	40	455	39	436	37	391	34	329	32	267
BA (m^2/ha)	**44**	0.4	44	0.5	36	0.5	33	0.6	31	0.6	30	0.7	27	0.8	23	1.0	18
VOL (m^3/ha)	**630**	54	684	45	548	43	514	41	481	40	460	38	413	35	347	33	281
BA (m^2/ha)	**47**	0.4	47	0.5	38	0.5	35	0.5	33	0.6	32	0.6	28	0.8	24	0.9	19
VOL (m^3/ha)	**665**	56	721	47	578	45	542	43	507	42	485	39	436	36	365	33	295
BA (m^2/ha)	**49**	0.4	50	0.5	40	0.5	37	0.5	35	0.5	33	0.6	30	0.7	25	0.9	20
VOL (m^3/ha)	**700**	58	758	49	608	47	570	44	533	43	510	40	458	36	383	33	310
BA (m^2/ha)	**52**	0.3	52	0.4	42	0.5	39	0.5	37	0.5	35	0.6	31	0.7	26	0.9	21
VOL (m^3/ha)	**735**	61	796	51	637	48	598	46	559	44	535	41	480	37	402	34	324
BA (m^2/ha)	**54**	0.3	55	0.4	44	0.4	41	0.5	38	0.5	37	0.5	33	0.7	28	0.8	22

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 24	PRESENT AGE 60						PRESENT HEIGHT 28.4 M						HEIGHT IN 5 YEARS 30.6 M			
VOL (m^3/ha)	770	63	833	53	667	50	626	47	585	46	560	43	502	38	420	34	339
BA (m^2/ha)	57	0.3	57	0.4	46	0.4	43	0.4	40	0.5	39	0.5	35	0.6	29	0.8	23
VOL (m^3/ha)	805	66	871	54	697	52	654	49	611	47	585	44	524	39	439	35	353
BA (m^2/ha)	60	0.3	60	0.4	48	0.4	45	0.4	42	0.4	40	0.5	36	0.6	30	0.7	24
VOL (m^3/ha)	840	68	908	56	727	53	682	51	637	49	610	45	547	40	457	36	368
BA (m^2/ha)	62	0.3	63	0.4	50	0.4	47	0.4	44	0.4	42	0.5	38	0.6	31	0.7	25

Loading red pine tree lengths for transport from Vivian Forest, York County (W. Masters, 1960)

TABLE 3 (continued)

Debarked red pine poles are stored at Orr Lake Forest Headquarters, Simcoe County. (W.D. Marshall, 1963)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 26	PRESENT AGE 20						PRESENT HEIGHT 10.8 M				HEIGHT IN 5 YEARS 13.4 M					
VOL (m^3/ha)	**105**	88	193	93	175	94	171	96	167	97	165	100	160	104	154	110	148
BA (m^2/ha)	**21**	9.7	31	11.2	28	11.7	27	12.1	27	12.4	26	13.2	26	14.3	25	15.6	24
VOL (m^3/ha)	**140**	85	225	88	198	89	192	90	186	91	182	93	174	97	164	103	155
BA (m^2/ha)	**28**	7.9	36	9.4	32	9.8	31	10.3	30	10.6	29	11.3	28	12.6	26	14.0	25
VOL (m^3/ha)	**175**	86	261	85	224	86	216	87	207	87	202	89	191	92	177	97	164
BA (m^2/ha)	**35**	6.7	41	8.0	36	8.4	34	8.8	33	9.1	32	9.9	31	11.1	28	12.6	26
VOL (m^3/ha)	**210**	88	298	86	252	85	241	85	231	85	224	86	210	89	191	93	174
BA (m^2/ha)	**42**	5.7	47	6.9	40	7.3	38	7.7	37	8.0	36	8.7	33	9.9	30	11.4	28
	SITE INDEX 26	PRESENT AGE 25						PRESENT HEIGHT 13.4 M				HEIGHT IN 5 YEARS 16.0 M					
VOL (m^3/ha)	**140**	89	229	94	205	96	199	98	194	99	191	102	184	108	175	115	167
BA (m^2/ha)	**22**	8.1	31	9.5	27	9.9	27	10.3	26	10.6	25	11.3	25	12.4	23	13.7	22
VOL (m^3/ha)	**175**	87	262	89	228	91	220	92	213	93	208	96	198	101	186	108	174
BA (m^2/ha)	**28**	6.9	35	8.2	30	8.6	29	9.0	28	9.3	28	9.9	26	11.1	25	12.4	23
VOL (m^3/ha)	**210**	86	296	87	254	88	244	89	234	89	228	92	215	96	198	102	183
BA (m^2/ha)	**33**	5.9	39	7.1	34	7.5	32	7.9	31	8.2	30	8.8	29	10.0	26	11.4	24
VOL (m^3/ha)	**245**	87	332	86	281	86	269	87	256	87	249	89	233	92	212	98	192
BA (m^2/ha)	**39**	5.2	44	6.3	37	6.7	36	7.0	34	7.3	33	7.9	31	9.0	28	10.4	26
VOL (m^3/ha)	**280**	90	370	86	309	86	295	86	280	86	272	87	253	90	227	95	203
BA (m^2/ha)	**44**	4.6	49	5.7	41	6.0	39	6.3	37	6.6	36	7.2	34	8.2	30	9.6	27
VOL (m^3/ha)	**315**	93	408	88	339	87	322	86	305	86	295	86	273	88	242	92	214
BA (m^2/ha)	**50**	4.2	54	5.1	45	5.4	43	5.7	41	6.0	39	6.5	36	7.6	32	8.9	29

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 26			PRESENT AGE 30				PRESENT HEIGHT 16.0 M						HEIGHT IN 5 YEARS 18.6 M			
VOL (m^3/ha)	**210**	86	296	89	256	91	247	92	237	93	232	96	220	102	204	110	190
BA (m^2/ha)	**28**	5.9	34	7.1	29	7.4	28	7.8	27	8.0	27	8.7	25	9.7	23	11.0	32
VOL (m^3/ha)	**245**	85	330	87	281	88	270	89	259	90	252	92	237	97	217	105	199
BA (m^2/ha)	**33**	5.2	38	6.3	32	6.6	31	7.0	30	7.2	29	7.8	27	8.9	25	10.1	23
VOL (m^3/ha)	**280**	86	366	86	308	86	294	87	281	87	273	89	255	94	231	100	209
BA (m^2/ha)	**37**	4.6	42	5.6	35	5.9	34	6.3	32	6.5	31	7.1	29	8.1	26	9.4	24
VOL (m^3/ha)	**315**	87	402	85	336	85	320	86	304	86	295	87	274	91	245	97	219
BA (m^2/ha)	**42**	4.2	46	5.1	38	5.4	37	5.7	35	5.9	34	6.5	31	7.5	28	8.7	25
VOL (m^3/ha)	**350**	90	440	86	365	85	346	85	328	85	318	86	294	89	261	94	230
BA (m^2/ha)	**46**	3.8	50	4.7	42	4.9	40	5.2	38	5.4	36	6.0	34	6.9	30	8.1	26
VOL (m^3/ha)	**385**	92	477	87	394	86	373	86	353	85	341	85	314	87	277	91	242
BA (m^2/ha)	**51**	3.5	54	4.3	45	4.5	43	4.8	40	5.0	39	5.5	36	6.4	22	7.6	28
VOL (m^3/ha)	**420**	96	516	89	423	87	401	86	379	86	365	85	335	86	293	89	254
BA (m^2/ha)	**56**	3.2	59	4.0	48	4.2	46	4.5	43	4.6	42	5.1	38	6.0	34	7.1	29
	SITE INDEX 26			PRESENT AGE 35				PRESENT HEIGHT 18.6 M						HEIGHT IN 5 YEARS 21.1 M			
VOL (m^3/ha)	**245**	84	329	87	282	88	270	90	260	91	253	94	239	101	220	109	203
BA (m^2/ha)	**28**	5.0	33	6.0	28	6.3	27	6.7	26	6.9	25	7.4	24	8.4	22	9.6	20
VOL (m^3/ha)	**280**	83	363	85	307	86	294	87	281	88	273	91	256	96	233	104	212
BA (m^2/ha)	**32**	4.5	36	5.4	31	5.7	30	6.0	28	6.2	28	6.8	26	7.7	23	8.9	21
VOL (m^3/ha)	**315**	83	398	83	334	84	319	85	304	86	295	88	274	92	247	100	222
BA (m^2/ha)	**36**	4.0	40	4.9	34	5.2	32	5.5	31	5.7	30	6.2	28	7.1	25	8.3	22
VOL (m^3/ha)	**350**	84	434	83	362	83	344	84	327	84	317	86	293	90	262	96	233
BA (m^2/ha)	**40**	3.7	44	4.5	36	4.7	35	5.0	33	5.2	32	5.7	29	6.6	26	7.7	23
VOL (m^3/ha)	**385**	86	471	83	390	83	370	83	351	83	339	84	313	87	277	93	244
BA (m^2/ha)	**44**	3.4	47	4.1	39	4.4	37	4.6	35	4.8	34	5.3	31	6.1	28	7.3	25
VOL (m^3/ha)	**420**	88	508	84	419	83	397	83	375	83	362	83	333	86	293	91	255
BA (m^2/ha)	**48**	3.1	51	3.8	42	4.0	40	4.3	38	4.5	36	4.9	33	5.7	29	6.8	26
VOL (m^3/ha)	**455**	91	546	84	448	84	424	83	400	83	386	83	354	84	309	89	267
BA (m^2/ha)	**52**	2.9	55	3.6	43	3.8	43	4.0	40	4.2	39	4.6	36	5.4	31	6.4	27
VOL (m^3/ha)	**490**	94	584	87	477	85	451	84	425	84	410	83	375	84	326	87	279
BA (m^2/ha)	**56**	2.7	59	3.3	48	3.5	45	3.8	43	3.9	41	4.3	38	5.1	33	6.1	28

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 26	PRESENT AGE 40						PRESENT HEIGHT 21.1 M				HEIGHT IN 5 YEARS 23.6 M					
VOL (m^3/ha)	280	79	359	82	305	83	292	85	279	86	272	89	255	95	232	104	212
BA (m^2/ha)	28	4.1	32	5.0	27	5.2	26	5.5	25	5.7	24	6.2	23	7.1	21	8.1	19
VOL (m^3/ha)	315	79	394	80	331	81	316	82	301	83	292	86	273	91	246	99	222
BA (m^2/ha)	32	3.7	35	4.5	30	4.8	28	5.0	27	5.2	26	5.7	24	6.5	22	7.6	20
VOL (m^3/ha)	350	79	429	79	358	80	341	81	324	81	314	83	291	88	260	95	232
BA (m^2/ha)	35	3.4	38	4.1	32	4.4	31	4.6	29	4.8	28	5.3	26	6.1	23	7.1	21
VOL (m^3/ha)	385	80	465	79	386	79	366	79	347	80	336	82	310	86	275	92	243
BA (m^2/ha)	39	3.1	42	3.8	35	4.0	33	4.3	31	4.4	30	4.9	28	5.6	25	6.6	22
VOL (m^3/ha)	420	82	502	79	414	79	392	79	371	79	359	80	330	83	290	89	254
BA (m^2/ha)	42	2.9	45	3.5	37	3.7	35	4.0	33	4.1	32	4.5	30	5.3	26	6.3	23
VOL (m^3/ha)	455	84	539	80	442	79	419	79	396	79	382	79	350	82	306	87	265
BA (m^2/ha)	46	2.7	48	3.3	40	3.5	38	3.7	35	3.8	34	4.2	31	4.9	27	5.9	24
VOL (m^3/ha)	490	86	576	80	471	80	446	79	420	79	405	79	371	81	323	85	278
BA (m^2/ha)	49	2.5	52	3.1	42	3.2	40	3.5	38	3.6	36	4.0	33	4.6	29	5.6	25
VOL (m^3/ha)	525	88	613	82	500	80	473	80	445	79	429	79	391	80	339	84	290
BA (m^2/ha)	53	2.3	55	2.9	45	3.0	42	3.2	40	3.4	38	3.7	35	4.4	30	5.3	26
VOL (m^3/ha)	560	91	651	83	530	82	500	80	471	80	453	79	413	79	356	82	303
BA (m^2/ha)	56	2.2	58	2.7	47	2.9	45	3.1	42	3.2	41	3.5	37	4.1	32	5.0	27
VOL (m^3/ha)	595	93	688	85	560	83	528	81	496	81	477	79	434	79	373	81	316
BA (m^2/ha)	60	2.1	62	2.6	50	2.7	47	2.9	44	3.0	43	3.3	39	3.9	33	4.8	28
	SITE INDEX 26	PRESENT AGE 45						PRESENT HEIGHT 23.6 M				HEIGHT IN 5 YEARS 26.0 M					
VOL (m^3/ha)	350	72	422	73	352	74	335	75	318	75	308	78	285	83	255	90	226
BA (m^2/ha)	31	2.9	34	3.6	29	3.8	27	4.0	26	4.1	25	4.5	23	5.2	21	6.1	18
VOL (m^3/ha)	385	73	458	72	379	73	360	73	341	74	330	76	304	80	269	87	237
BA (m^2/ha)	34	2.7	37	3.3	31	3.5	29	3.7	28	3.8	27	4.2	25	4.9	22	5.8	19
VOL (m^3/ha)	420	74	494	72	407	72	386	73	365	73	352	74	324	78	285	84	248
BA (m^2/ha)	38	2.5	40	3.0	33	3.2	31	3.4	30	3.6	29	3.9	26	4.5	23	5.4	20
VOL (m^3/ha)	455	76	531	73	435	72	412	72	389	72	375	73	344	76	301	82	260
BA (m^2/ha)	41	2.3	43	2.8	35	3.0	33	3.2	32	3.3	30	3.7	28	4.3	24	5.1	21
VOL (m^3/ha)	490	77	567	73	464	73	439	72	414	72	399	73	364	75	317	80	272
BA (m^2/ha)	44	2.1	46	2.6	38	2.8	36	3.0	34	3.1	32	3.4	30	4.0	26	4.8	22
VOL (m^3/ha)	525	79	604	74	493	73	466	73	438	72	422	72	385	74	333	78	284
BA (m^2/ha)	47	2.0	49	2.5	40	2.6	38	2.8	36	2.9	34	3.2	31	3.8	27	4.6	23
VOL (m^3/ha)	560	82	642	75	522	74	493	73	463	73	446	72	406	73	350	76	297
BA (m^2/ha)	50	1.9	52	2.3	42	2.5	40	2.6	38	2.7	36	3.0	33	3.6	28	4.3	24
VOL (m^3/ha)	595	84	679	77	551	75	520	74	489	73	470	73	427	73	367	75	310
BA (m^2/ha)	53	1.8	55	2.2	45	2.3	42	2.5	40	2.6	38	2.9	35	3.4	30	4.1	25
VOL (m^3/ha)	630	86	716	78	581	76	547	75	514	74	494	73	448	72	384	74	323
BA (m^2/ha)	56	1.7	58	2.1	47	2.2	44	2.4	42	2.5	40	2.7	36	3.2	31	3.9	26
VOL (m^3/ha)	665	89	754	80	611	78	575	76	540	75	519	73	470	72	402	74	336
BA (m^2/ha)	60	1.6	61	2.0	50	2.1	47	2.2	44	2.3	42	2.6	38	3.1	33	3.7	27
VOL (m^3/ha)	700	92	792	81	640	79	603	77	566	76	543	74	492	72	419	73	350
BA (m^2/ha)	63	1.5	64	1.9	52	2.0	49	2.1	46	2.2	44	2.5	40	2.9	34	3.6	28

TABLE 3 (continued)

	Stand before thinning	0		20		25		30		33		40		50		60	
		Percent thinning															
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 26	PRESENT AGE 50						PRESENT HEIGHT 26.0 M						HEIGHT IN 5 YEARS 28.4 M			
VOL (m^3/ha)	385	64	449	63	369	63	350	63	331	64	320	65	294	69	258	75	225
BA (m^2/ha)	31	2.1	33	2.5	27	2.7	26	2.8	25	3.0	24	3.3	22	3.8	19	4.5	17
VOL (m^3/ha)	420	65	485	63	397	63	376	63	355	63	342	64	314	67	274	72	237
BA (m^2/ha)	34	1.9	36	2.3	29	2.5	28	2.6	26	2.7	25	3.0	23	3.5	20	4.2	18
VOL (m^3/ha)	455	66	521	63	426	63	402	63	379	63	366	63	334	65	290	70	249
BA (m^2/ha)	37	1.8	39	2.2	32	2.3	30	2.5	28	2.6	27	2.8	25	3.3	21	4.0	18
VOL (m^3/ha)	490	68	558	64	454	63	429	63	404	63	389	63	354	64	306	68	261
BA (m^2/ha)	40	1.6	41	2.0	34	2.2	32	2.3	30	2.4	29	2.6	26	3.1	23	3.7	19
VOL (m^3/ha)	525	70	595	65	483	64	456	63	429	63	413	63	375	64	323	67	273
BA (m^2/ha)	43	1.5	44	1.9	36	2.0	34	2.2	32	2.2	31	2.5	28	2.9	24	3.5	20
VOL (m^3/ha)	560	72	632	66	512	65	483	64	454	63	436	63	396	63	340	66	286
BA (m^2/ha)	45	1.4	47	1.8	38	1.9	36	2.0	34	2.1	32	2.3	29	2.8	25	3.4	21
VOL (m^3/ha)	595	74	669	67	542	66	510	64	479	64	461	63	417	63	357	65	299
BA (m^2/ha)	48	1.4	50	1.7	40	1.8	38	1.9	36	2.0	34	2.2	31	2.6	26	3.2	22
VOL (m^3/ha)	630	76	706	68	571	67	538	65	505	65	485	63	439	63	375	64	312
BA (m^2/ha)	51	1.3	52	1.6	42	1.7	40	1.8	37	1.9	36	2.1	33	2.5	28	3.0	23
VOL (m^3/ha)	665	78	743	70	601	68	565	66	530	66	509	64	460	63	392	63	326
BA (m^2/ha)	54	1.2	55	1.5	45	1.6	42	1.7	39	1.8	38	2.0	34	2.4	29	2.9	24
VOL (m^3/ha)	700	81	781	71	630	69	593	68	556	67	534	65	482	63	410	63	339
BA (m^2/ha)	57	1.2	58	1.4	47	1.5	44	1.6	41	1.7	40	1.9	36	2.3	30	2.8	25
VOL (m^3/ha)	735	83	818	73	660	71	621	69	582	68	558	65	504	63	428	63	353
BA (m^2/ha)	60	1.1	61	1.4	49	1.5	46	1.6	43	1.6	41	1.8	37	2.2	32	2.7	26
VOL (m^3/ha)	770	86	856	75	690	73	649	70	607	69	583	66	526	63	445	63	367
BA (m^2/ha)	62	1.1	63	1.3	51	1.4	48	1.5	45	1.6	43	1.7	39	2.1	33	2.5	27
	SITE INDEX 26	PRESENT AGE 55						PRESENT HEIGHT 28.4 M						HEIGHT IN 5 YEARS 30.8 M			
VOL (m^3/ha)	420	52	472	48	383	48	361	47	340	47	327	47	297	49	256	52	216
BA (m^2/ha)	31	1.1	32	1.4	26	1.5	25	1.6	23	1.6	22	1.8	20	2.1	17	2.6	15
VOL (m^3/ha)	455	53	508	49	412	48	388	48	365	48	351	47	318	48	272	50	229
BA (m^2/ha)	34	1.0	35	1.3	28	1.4	27	1.5	25	1.5	24	1.7	22	2.0	19	2.4	16
VOL (m^3/ha)	490	55	545	50	441	49	415	49	390	48	374	47	339	48	290	49	242
BA (m^2/ha)	36	1.0	37	1.2	30	1.3	28	1.4	27	1.4	26	1.6	23	1.9	20	2.3	16
VOL (m^3/ha)	525	57	582	52	470	50	443	49	415	49	399	48	360	47	307	49	255
BA (m^2/ha)	39	0.9	40	1.1	32	1.2	30	1.3	28	1.3	27	1.5	25	1.8	21	2.1	17
VOL (m^3/ha)	560	59	619	53	500	52	470	50	440	50	423	48	382	47	324	48	268
BA (m^2/ha)	41	0.8	42	1.1	34	1.1	32	1.2	30	1.3	29	1.4	26	1.7	22	2.0	18
VOL (m^3/ha)	595	62	657	54	529	53	498	51	466	51	447	49	404	48	342	48	282
BA (m^2/ha)	44	0.8	45	1.0	36	1.1	34	1.1	32	1.2	31	1.3	28	1.6	23	1.9	19
VOL (m^3/ha)	630	64	694	56	559	54	525	53	492	52	472	50	425	48	360	47	296
BA (m^2/ha)	47	0.8	47	0.9	38	1.0	36	1.1	34	1.1	32	1.2	29	1.5	25	1.8	20
VOL (m^3/ha)	665	66	731	58	588	56	553	54	517	53	496	51	447	48	378	47	310
BA (m^2/ha)	49	0.7	50	0.9	40	1.0	38	1.0	35	1.1	34	1.2	31	1.4	26	1.7	21
VOL (m^3/ha)	700	69	769	59	618	57	581	55	543	54	521	51	469	49	396	47	324
BA (m^2/ha)	52	0.7	53	0.9	42	0.9	40	1.0	37	1.0	36	1.1	32	1.3	27	1.7	22

TABLE 3 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 26	PRESENT AGE 55						PRESENT HEIGHT 28.4 M						HEIGHT IN 5 YEARS 30.8 M			
VOL (m^3/ha)	**735**	71	806	61	648	59	608	57	569	55	546	52	491	49	414	47	338
BA (m^2/ha)	**54**	0.7	55	0.8	44	0.9	42	0.9	39	1.0	37	1.1	34	1.3	28	1.6	23
VOL (m^3/ha)	**770**	74	844	63	678	60	636	58	595	57	571	54	513	50	432	48	352
BA (m^2/ha)	**57**	0.6	58	0.8	46	0.8	43	0.9	41	0.9	39	1.0	35	1.2	30	1.5	24
VOL (m^3/ha)	**805**	76	881	65	708	62	664	59	621	58	595	55	535	51	450	48	366
BA (m^2/ha)	**60**	0.6	60	0.7	48	0.8	45	0.8	42	0.9	41	1.0	37	1.2	31	1.5	25
VOL (m^3/ha)	**840**	79	919	67	737	64	692	61	647	59	620	56	557	51	468	48	381
BA (m^2/ha)	**62**	0.6	63	0.7	50	0.8	47	0.8	44	0.8	42	0.9	38	1.1	32	1.4	26
	SITE INDEX 26	PRESENT AGE 60						PRESENT HEIGHT 30.8 M						HEIGHT IN 5 YEARS 33.1 M			
VOL (m^3/ha)	**455**	36	491	30	392	28	368	26	343	25	328	23	294	20	245	18	196
BA (m^2/ha)	**31**	0.1	31	0.1	25	0.1	23	0.1	22	0.2	21	0.2	19	0.2	15	0.3	12
VOL (m^3/ha)	**490**	39	529	32	422	30	396	28	369	27	353	25	316	21	263	18	211
BA (m^2/ha)	**33**	0.1	34	0.1	27	0.1	25	0.1	23	0.1	22	0.2	20	0.2	17	0.2	13
VOL (m^3/ha)	**525**	41	566	34	452	32	424	30	396	29	378	26	339	23	282	19	226
BA (m^2/ha)	**36**	0.1	36	0.1	29	0.1	27	0.1	25	0.1	24	0.1	21	0.2	18	0.2	14
VOL (m^3/ha)	**560**	44	604	36	482	34	452	32	422	30	404	28	361	24	301	20	240
BA (m^2/ha)	**38**	0.1	38	0.1	31	0.1	29	0.1	27	0.1	26	0.1	23	0.2	19	0.2	15
VOL (m^3/ha)	**595**	47	642	38	513	36	480	33	448	32	429	29	384	25	319	21	255
BA (m^2/ha)	**41**	0.1	41	0.1	32	0.1	30	0.1	28	0.1	27	0.1	24	0.2	20	0.2	16
VOL (m^3/ha)	**630**	49	679	40	543	37	508	35	474	34	454	31	406	26	338	22	270
BA (m^2/ha)	**43**	0.1	43	0.1	34	0.1	32	0.1	30	0.1	29	0.1	26	0.1	21	0.2	17
VOL (m^3/ha)	**665**	52	717	42	573	39	537	37	501	35	479	32	429	27	357	23	285
BA (m^2/ha)	**45**	0.1	45	0.1	36	0.1	34	0.1	32	0.1	30	0.1	27	0.1	23	0.2	18
VOL (m^3/ha)	**700**	54	754	44	603	41	565	39	527	37	504	34	451	29	376	24	300
BA (m^2/ha)	**48**	0.1	48	0.1	38	0.1	36	0.1	33	0.1	32	0.1	29	0.1	24	0.2	19
VOL (m^3/ha)	**735**	57	792	46	633	43	593	40	553	39	529	35	474	30	394	25	315
BA (m^2/ha)	**50**	0.1	50	0.1	40	0.1	38	0.1	35	0.1	34	0.1	30	0.1	25	0.2	20
VOL (m^3/ha)	**770**	60	830	48	663	45	621	42	579	41	554	37	496	31	413	26	330
BA (m^2/ha)	**53**	0.1	53	0.1	42	0.1	39	0.1	37	0.1	35	0.1	31	0.1	26	0.2	21
VOL (m^3/ha)	**805**	62	867	50	693	47	649	44	606	42	580	38	519	32	432	27	345
BA (m^2/ha)	**55**	0.1	55	0.1	44	0.1	41	0.1	38	0.1	37	0.1	33	0.1	27	0.1	22
VOL (m^3/ha)	**840**	65	905	52	723	49	678	46	632	44	605	40	541	34	451	27	360
BA (m^2/ha)	**57**	0.1	57	0.1	46	0.1	43	0.1	40	0.1	38	0.1	34	0.1	29	0.1	23
VOL (m^3/ha)	**875**	68	943	54	753	51	706	48	658	46	630	41	564	35	469	28	375
BA (m^2/ha)	**60**	0.1	60	0.1	48	0.1	45	0.1	42	0.1	40	0.1	36	0.1	30	0.1	24
VOL (m^3/ha)	**910**	70	980	56	783	53	734	50	685	48	655	43	586	36	488	29	390
BA (m^2/ha)	**62**	0.1	62	0.1	50	0.1	47	0.1	43	0.1	42	0.1	37	0.1	31	0.1	25

Individual Tree Volume (Table 4)

The fourth table is a typical standard volume table relating gross total underbark volume (m^3) to the diameter (cm) and total height (m) of a red pine tree. It may be used to estimate the volumes of individual trees or, with the help of a height/diameter curve, to develop a local volume table from a sample of trees.

The following steps are necessary to use the table:

1. The diameter at breast height (outside bark) of the tree must be obtained.
2. The total height of the tree (including top and stump) must be determined.
3. Enter the table with the proper diameter and height and interpolate the volume from the figures presented.

TABLE 4 Individual tree red pine standard volume table

Dbh.ob (cm)	Gross total volume (m^3)														
	Total height (m)														
	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
4	0.0033	0.0035	0.0037	0.0039	0.0040	0.0042	0.0044	0.0046	0.0047	0.0049	0.0051	0.0053	0.0054	0.0056	0.0058
6	0.0065	0.0088	0.0111	0.0135	0.0158	0.0181	0.0204	0.0227	0.0250	0.0274	0.0297	0.0320	0.0343	0.0366	0.0390
8	0.0103	0.0153	0.0204	0.0254	0.0304	0.0354	0.0405	0.0455	0.0505	0.0555	0.0605	0.0656	0.0706	0.0756	0.0806
10	0.0148	0.0231	0.0314	0.0397	0.0479	0.0562	0.0645	0.0728	0.0811	0.0894	0.0977	0.1060	0.1143	0.1226	0.1308
12	0.0199	0.0320	0.0442	0.0563	0.0684	0.0805	0.0926	0.1047	0.1169	0.1290	0.1411	0.1532	0.1653	0.1775	0.1896
14	0.0257	0.0422	0.0587	0.0753	0.0918	0.1083	0.1248	0.1413	0.1578	0.1743	0.1908	0.2073	0.2238	0.2403	0.2568
16	0.0322	0.0537	0.0751	0.0966	0.1180	0.1395	0.1609	0.1824	0.2038	0.2253	0.2467	0.2682	0.2896	0.3111	0.3325
18	0.0393	0.0663	0.0933	0.1202	0.1472	0.1742	0.2011	0.2281	0.2550	0.2820	0.3090	0.3359	0.3629	0.3898	0.4168
20	0.0472	0.0802	0.1132	0.1462	0.1793	0.2123	0.2453	0.2784	0.3114	0.3444	0.3775	0.4105	0.4435	0.4765	0.5096
22	0.0556	0.0953	0.1349	0.1746	0.2143	0.2539	0.2936	0.3332	0.3729	0.4126	0.4522	0.4919	0.5315	0.5712	0.6109
24	0.0648	0.1116	0.1585	0.2053	0.2522	0.2990	0.3459	0.3927	0.4396	0.4864	0.5333	0.5801	0.6270	0.6738	0.7207
26	0.0745	0.1292	0.1838	0.2348	0.2930	0.3476	0.4022	0.4568	0.5114	0.5660	0.6206	0.6752	0.7298	0.7844	0.8390
28	0.0850	0.1479	0.2108	0.2738	0.3367	0.3996	0.4625	0.5254	0.5883	0.6512	0.7142	0.7771	0.8400	0.9029	0.9658
30	0.0961	0.1679	0.2397	0.3115	0.3833	0.4551	0.5269	0.5986	0.6704	0.7422	0.8140	0.8858	0.9576	1.0294	1.1012
32	0.1079	0.1891	0.2704	0.3516	0.4328	0.5140	0.5953	0.6765	0.7577	0.8389	0.9201	1.0014	1.0826	1.1638	1.2450
34	0.1204	0.2116	0.3028	0.3940	0.4852	0.5765	0.6677	0.7589	0.8501	0.9413	1.0325	1.1237	1.2150	1.3062	1.3974
36	0.1335	0.2353	0.3370	0.4388	0.5406	0.6424	0.7441	0.8459	0.9477	1.0494	1.1512	1.2530	1.3547	1.4565	1.5583
38	0.1473	0.2602	0.3731	0.4859	0.5988	0.7117	0.8246	0.9375	1.0504	1.1633	1.2761	1.3890	1.5019	1.6148	1.7277
40	0.1617	0.2863	0.4109	0.5354	0.6600	0.7845	0.9091	1.0337	1.1582	1.2828	1.4073	1.5319	1.6565	1.7810	1.9056

Site Index (Table 5)

Site index is an estimate of stand productivity based on the measured stand dominant height at age 50. Site index is often used as an entering variable in growth and yield tables, as it has been in Tables 1 and 2. Table 5 should prove useful in estimating the site index of red pine plantation stands that have not yet attained the age of 50 years.

Site index may also be obtained graphically from the corresponding chart (Figure 1).

The following steps are necessary to use the site index table or the chart:

1. Determine the stand age and the stand dominant height.
2. Enter the table or chart with the proper age and dominant height and interpolate the resulting site index from the figures presented.

TABLE 5 Site index for red pine plantations

Age (years)	Stand dominant height (m) at age 50																
	Present height (m)																
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
20	13	15	18	21	24	26	29	32	35								
22	11	14	17	19	22	25	27	30	33								
24	10	13	15	18	21	23	26	28	31	33							
26		12	14	17	19	22	24	27	29	32	34						
28		11	13	16	18	20	23	25	28	30	32	35					
30		10	12	15	17	19	22	24	26	29	31	33					
32			11	14	16	18	21	23	25	27	30	32	34				
34			11	13	15	17	20	22	24	26	29	31	33				
36			10	12	14	16	19	21	23	25	27	30	32	34			
38				11	14	16	18	20	22	24	26	29	31	33			
40				11	13	15	17	19	21	23	26	28	30	32	34		
42				10	12	14	16	18	21	23	25	27	29	31	33		
44					12	14	16	18	20	22	24	26	28	30	32	34	
46					11	13	15	17	19	21	23	25	27	29	31	33	
48					10	13	15	17	19	21	23	25	27	29	31	33	35
50					10	12	14	16	18	20	22	24	26	28	30	32	34
52						11	13	15	17	19	21	23	25	27	29	31	33
54						11	13	15	17	19	21	23	25	27	29	31	33

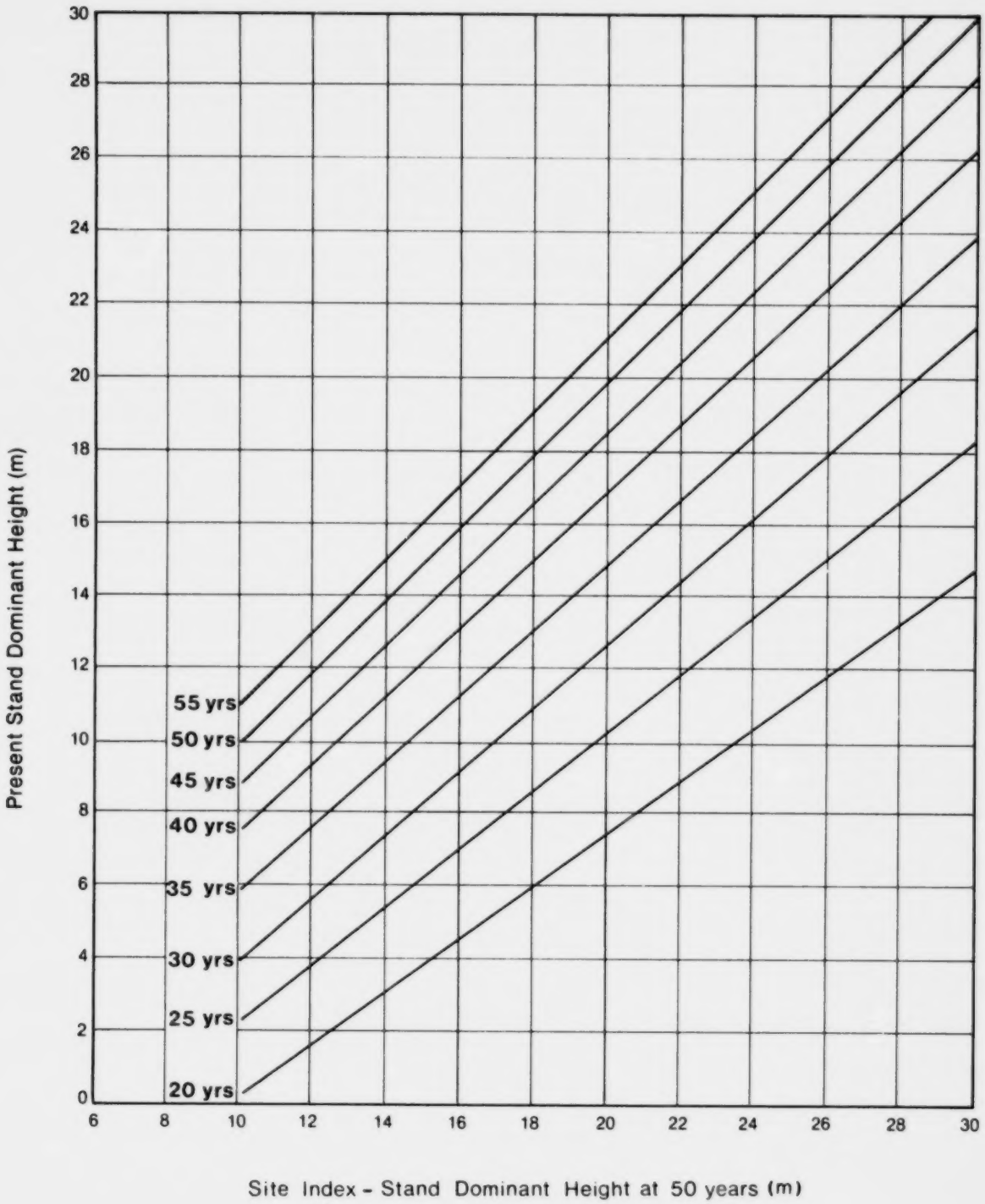


Figure 1 Site index for red pine plantations.

Acknowledgements

It is impossible to acknowledge personally all of the people who have contributed to this ongoing project which has now spanned over three decades.

W.S. Ross Grinnell supported the program of permanent sample plot establishment and measurement from the outset. Harry Middleton was responsible for the red pine growth and yield program for many years before it was transferred to the then Research Branch. Many other foresters of foresight in head office and the districts supported the program as a matter of principle and also helped in the location, establishment and treatment of the plots.

Much field work was performed by the technicians of the districts involved. Some of this work is reflected by the photographs found in this report. Many photographs were obtained from the County Forest File of the MNR photo Library, Queen's Park, Toronto.

Messrs. Terry Taylor, Joe Svaton, Rudy Bes and Sandy Pessione and Ms. Gordina Schellenberg of the Ontario Tree Improvement and Forest Biomass Institute have laboured long in data collection, compilation and analysis.

Drs. J.A. Mervart and J.E. Osborn gave constructive criticism of the draft manuscript.

To all of these people, we say a very grateful 'thank you'.

Finally, because of the ongoing nature of this project, the authors wish success to all who may become involved in the continuation of this study.

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APPENDIX 1

Data Source and Analysis

All tables, equations and charts presented in this report have been based on data collected on permanent sample plots located in regional forests from the Bruce Peninsula to the Ottawa River in southern Ontario and in the Kirkwood Forest of the Blind River district in central Ontario (Table 6, Figure 2). The data include 393 plot measurements and remeasurements (306 measurement periods) on 87 permanent sample plots. The range of the data used is presented in Table 7. The data, covering thinned and unthinned stands planted at a spacing of 1.7 m x 1.7 m to 2.3 m x 2.3 m, have been collected by the Ontario Tree Improvement and Forest Biomass Institute.

Besides successive measurements on standing trees in permanent sample plots, scaling and stem analysis data from sample trees cut during thinning operations have been incorporated into the data base.

TABLE 6 List of forests sampled

Forest	Number of plots	Measurement periods	Age at first measurement	Age at last measurement
Flinton	1	7	22	52
Hendrie-Main	3	21	24	54
Hendrie-N.E. Orrock	11	33	30	43
Hendrie-S. Orrock	4	12	29	43
Kirkwood	4	20	21	50
Kirkwood	5	5	33	39
Larose	4	4	24	30
Larose	5	5	25	32
Limerick	4	8	30	43
Mono	2	12	22	53
Orr Lake-Hamilton	5	40	17	49
Orr Lake-Main	3	9	35	49
Orr Lake-Stoney	6	18	36	50
Sauble	11	22	32	43
Slessor	2	2	23	30
Vivian	9	72	24	57
Wildman-Charlebois	8	16	29	44
Total	87	306		

TABLE 7 Range of available data

Variable	Minimum value	Maximum value
Volume (m^3/ha)	74.5	706.7
Basal area (m^2/ha)	19.1	94.1
Dominant height (m)	8.4	25.9
Stand age (a)	17	57
Site index (m)	14.6	26.5

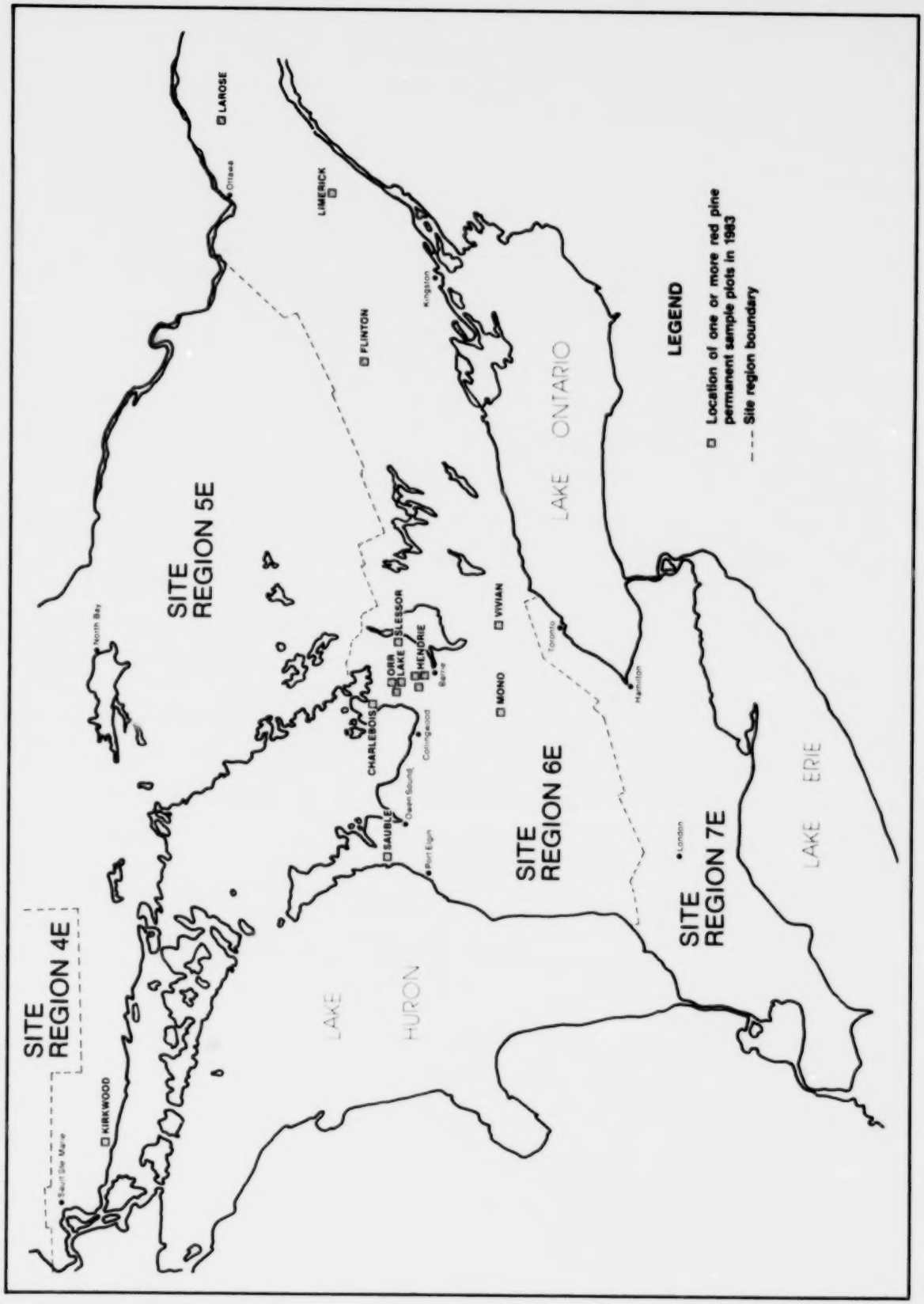

Figure 2 Location of red pine permanent sample plots.

Present Yield (Table 1)

Based on the 393 plot measurements, the following equation was derived:

$$V = -6.0027 + 0.4745(BA \times H)$$

where V = gross total underbark volume (m^3/ha)
BA = stand basal area (m^2/ha)
H = stand dominant height (m)

The equation is known as Spurr's combined variable formula (Spurr 1952). The coefficients were obtained through a simple linear regression procedure which had an overall standard error of 7.3632 m^3/ha and an R^2 value of 0.9957.

Normal Yield - Unthinned Stands (Table 2)

The same volume equation used in Table 1 was used to estimate normal yield in Table 2.

The equation for estimating height was based on only 361 plot measurements. The reason is explained in the discussion on Site Index. The height equation is:

$$H = 0.064374(S)\left(\frac{A}{50} - \left(\frac{A}{50}\right)^2\right) + (S)\left(\frac{A}{50}\right)$$

where H = stand dominant height (m)
S = site index (m)
A = stand age (a)

This equation was developed through a stepwise regression procedure with a zero intercept term and had an overall standard error of 0.652 m and an R^2 value of 0.7816.

The equation used to estimate future basal area was based on all plot measurements, including thinned and unthinned plots. It was originally intended for use only in Table 3; however, because of a desire to make Table 2 correspond to the 0% thinning of Table 3, the same future basal area equation was used.

$$B_f = [(72.2468 (A_f - A_n) + 1126666.67 (A_f^{-3} - A_n^{-3}) - 27388.0 (A_f^{-1} - A_n^{-1}) - 0.000255 S(A_f^3 - A_n^3)) + (B_n)^2]^{1/2}$$

where B_f = future stand basal area (m^2/ha)
B_n = present stand basal area (m^2/ha)
A_f = future stand age (a)
A_n = present stand age (a)
S = site index (m)

Future basal area could be estimated using this equation with an expected quadratic mean error of 1.86 m^2/ha.

This equation was derived by integration from an inverse basal area growth model developed by one of the authors, V.G. Smith, from ordinary least squares stepwise regression:

$$\Delta B \times B = 36.1234 - 1690000 (A^{-4}) + 13694 (A^{-2}) - 0.000382 (S)(A^2)$$

where ΔB = change in basal area in a measurement period (m^2/ha)
B = basal area mid-way through the time period (m^2/ha)
A = age mid-way through the time period (a)
S = site index (m)

This growth model had an R^2 value of 0.4693 and a standard error of 10.52 m^2/ha/a.

For the development of Tables 2 and 3, basal area growth was taken as the difference between the present basal area and the future basal area estimate. The basal area growth model, as such, was not used.

The equation to estimate the total number of stems per hectare was given by:

$$Stems = (41182.5219 - 5014.8230(S) + 181.5377(S^2)) \times A^{(0.3574-0.0428(S))}$$

where Stems = number of stems per hectare
S = site index (m)
A = stand age (a)

The stem function was developed in a 3-step procedure:

1. A graph showing stems per hectare vs age, by site class, was constructed.
2. A power function of the form, Stems = aA^b, was fitted for each site class, where a, b are regression coefficients.

3. All of the 'a' coefficients were regressed over site (S) resulting in a quadratic function of the form:

$a = 41182.5219 - 5014.8230(S) + 181.5377(S^2)$

All of the 'b' coefficients were regressed over site, resulting in a linear function of the form:

$b = 0.3574 - 0.0428(S)$

The equation to estimate the mean quadratic diameter was given by:

$D = (B/Stems \times 0.0000785398)^{1/2}$

where D = stand mean quadratic diameter (cm)
B = stand basal area (m^2/ha)
Stems = number of stems per hectare

This equation results in the diameter of the tree of average basal area. The factor, 0.0000785398, is simply used for the conversion of Imperial to SI units.

Projected Yield - Thinned and Unthinned Stands (Table 3)

The same stand volume equation that was used for estimating volume in Tables 1 and 2 was used for estimating yields in Table 3. As well, the same equation used for estimating future basal area in Table 2 was also used in Table 3. Finally, the equation employed to estimate present and future stand height was the same height equation used for Table 2.

Future volumes were calculated by first estimating the future stand height and future basal area, and using these in the equation for stand volume. The standard error of the future volume estimates was 7.67 m^3/ha.

Individual Tree Volume (Table 4)

The equation used to derive the individual tree standard volume table is:

$$V = 0.003913 - 0.001217(H) + 0.018580\left(\frac{DH}{100}\right) - 0.570567\left(\frac{D}{100}\right)^2 + 0.350407\left(\frac{D}{100}\right)^2 H$$ (Roebbelen and Smith 1981)

where V = estimated gross total underbark volume (m^3)
H = total tree height (m)
D = diameter-outside-bark at breast-height (cm)

This equation has been modified from T.W. Dwight's 6-term volume equation (Gerrard 1966) by dropping the diameter (D) term. Regression analysis indicated that the D-term was not significant in the reduction of standard error (Roebbelen and Smith 1981).

The standard volume equation is based on 3607 red pine trees felled in Ontario during the course of thinning studies. The data, collected by the Ontario Tree Improvement and Forest Biomass Institute, ranged in age from 10-49 years, in site index from 17.5 - 26.5 m, and in diameter from 4 - 41 cm. The volume equation had an overall error of 14.78% at the 95% significance level.

Site Index (Table 5)

The site index table and chart were based on 361 plot measurements of dominant height and derived by following procedures suggested by Curtis *et al.* (1974). Height/age curves were produced for those stands that were near to, or had exceeded the index age of 50 years. All stands with ages greater than 40 years at their last remeasurement were included in the procedure. Approximately half of the plots were at least 50 years old and therefore could be indexed directly. The curves for those stands with ages between 40 and 50 were extrapolated to the 50-year point. There are several reasons why this approach was felt to be adequate. These plots have had sufficient remeasurements to develop reliable height/age relationships. The extrapolation period was no greater than 7 years for any plot. The height/age curves established for plots with ages greater than or equal to 50 were used as guides for the extrapolation procedure.

In this manner, each measurement period of every plot had a stand age, dominant height and site index associated with it. A stepwise regression procedure was then used to develop the following site index equation:

$$Site = \alpha + \beta H$$

where $\alpha = 33.6154 - 5.5278(A^{-1/2}) + 0.002164(A^2)$
$\beta = 0.7455 + 12.7255(A^{-1})$
and Site = site index (m)
H = stand dominant height (m)
A = stand age (a)

This equation had an overall R^2 value of 0.9696 and a standard error of 0.6676 m.

APPENDIX 2

Tables in Imperial units.

The end of an era. Hauling red pine pulpwood from Kirkwood Forest, Algoma District. (R. Muckleston, 1956)

TABLE 8 Present yields for red pine plantations

Stand dominant height (feet)	Gross total volume (ft^3/ac)											
	Basal area (ft^2/ac)											
	80	100	120	140	160	180	200	220	240	260	280	300
25	863	1101	1338	1575	1812	2050	2287	2524	2761	2999	3236	3473
30	1053	1338	1623	1907	2192	2477	2761	3046	3331	3615	3900	4185
35	1243	1575	1907	2239	2572	2904	3236	3568	3900	4232	4564	4897
40	1433	1812	2192	2572	2951	3331	3710	4090	4470	4849	5229	5608
45	1623	2050	2477	2904	3331	3758	4185	4612	5039	5466	5893	6320
50	1812	2287	2761	3236	3710	4185	4659	5134	5608	6083	6557	7032
55	2002	2524	3046	3568	4090	4612	5134	5656	6178	6700	7222	7744
60	2192	2761	3331	3900	4470	5039	5608	6178	6747	7317	7886	8455
65	2382	2999	3615	4232	4849	5466	6083	6700	7317	7933	8550	9167
70	2572	3236	3900	4564	5229	5893	6557	7222	7886	8550	9215	9879
75	2761	3473	4185	4897	5608	6320	7032	7744	8455	9167	9879	10591
80	2951	3710	4470	5229	5988	6747	7506	8266	9025	9784	10543	11302
85	3141	3948	4754	5561	6368	7174	7981	8787	9594	10401	11207	12014

TABLE 9 Normal yields for unthinned red pine plantations.

Age (years)		Site index[a] 50	55	60	65	70	75	80	85
20	stems/ac	1155	1116	1150	1215	1284	1344	1385	1405
	ba (ft^2/ac)	71	90	107	123	138	151	165	177
	mean dbhob (in)	3.37	3.84	4.13	4.30	4.43	4.54	4.68	4.81
	vol (ft^3/ac)	677	969	1286	1621	1973	2341	2740	3132
	dom. height (ft)	23	25	27	29	32	34	36	38
25	stems/ac	1081	1030	1046	1088	1134	1170	1188	1188
	ba (ft^2/ac)	121	132	144	156	168	179	191	201
	mean dbhob (in)	4.53	4.84	5.03	5.13	5.21	5.30	5.42	5.57
	vol (ft^3/ac)	1499	1822	2185	2576	2995	3436	3916	4393
	dom. height (ft)	28	30	33	36	39	41	44	47
30	stems/ac	1025	964	967	995	1025	1044	1048	1036
	ba (ft^2/ac)	152	160	170	180	190	200	210	219
	mean dbhob (in)	5.21	5.52	5.68	5.76	5.83	5.92	6.06	6.23
	vol (ft^3/ac)	2254	2639	3067	3529	4021	4541	5103	5665
	dom. height (ft)	33	36	39	42	46	49	52	55
35	stems/ac	979	912	906	923	941	949	943	922
	ba (ft^2/ac)	174	182	190	199	207	216	225	233
	mean dbhob (in)	5.71	6.04	6.20	6.28	6.36	6.46	6.62	6.81
	vol (ft^3/ac)	2992	3444	3941	4474	5040	5636	6278	6921
	dom. height (ft)	37	41	45	48	52	56	60	63
40	stems/ac	941	869	856	864	873	873	860	834
	ba (ft^2/ac)	192	199	206	213	221	229	237	245
	mean dbhob (in)	6.12	6.47	6.64	6.73	6.81	6.93	7.11	7.33
	vol (ft^3/ac)	3718	4235	4799	5399	6036	6703	7421	8139
	dom. height (ft)	42	46	50	54	58	63	67	71
45	stems/ac	909	833	814	815	818	812	793	763
	ba (ft^2/ac)	207	212	218	225	232	239	246	253
	mean dbhob (in)	6.46	6.83	7.01	7.11	7.21	7.35	7.55	7.80
	vol (ft^3/ac)	4424	5003	5629	6293	6993	7726	8511	9296
	dom. height (ft)	46	51	55	60	64	69	74	78
50	stems/ac	881	802	778	774	771	760	738	705
	ba (ft^2/ac)	219	223	229	234	240	246	253	259
	mean dbhob (in)	6.75	7.14	7.34	7.45	7.56	7.71	7.93	8.21
	vol (ft^3/ac)	5105	5739	6421	7140	7896	8685	9528	10370
	dom. height (ft)	50	55	60	65	70	75	80	85
55	stems/ac	857	775	747	739	731	716	691	656
	ba (ft^2/ac)	228	232	236	241	246	252	258	263
	mean dbhob (in)	6.99	7.41	7.62	7.74	7.86	8.03	8.27	8.57
	vol (ft^3/ac)	5750	6433	7162	7927	8729	9563	10452	11338
	dom. height (ft)	54	59	65	70	75	81	86	92

[a]stand dominant height (ft) at 50 years.

TABLE 10 Projected five year growth and yield for thinned and unthinned red pine plantations

	Stand before thinning	0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 60			PRESENT AGE 20				PRESENT HEIGHT 27.0 FT						HEIGHT IN 5 YEARS 33.2 FT			
VOL (ft^3/ac)	**500**	1149	1649	1212	1595	1229	1583	1247	1572	1258	1565	1286	1551	1327	1534	1371	1519
BA (ft^2/ac)	**45**	64	110	70	106	71	106	73	105	74	104	76	104	80	102	83	102
VOL (ft^3/ac)	**1000**	980	1980	1036	1819	1054	1783	1074	1748	1086	1728	1118	1684	1171	1628	1232	1581
BA (ft^2/ac)	**84**	46	131	53	121	55	118	57	116	58	115	61	112	66	108	72	105
VOL (ft^3/ac)	**1500**	919	2419	948	2131	960	2064	975	1999	985	1962	1012	1878	1062	1769	1126	1675
BA (ft^2/ac)	**123**	35	159	42	140	43	136	45	132	47	130	50	124	56	117	62	111
	SITE INDEX 60			PRESENT AGE 25				PRESENT HEIGHT 33.2 FT						HEIGHT IN 5 YEARS 39.0 FT			
VOL (ft^3/ac)	**1000**	1066	2066	1142	1925	1164	1893	1188	1863	1204	1845	1242	1808	1302	1759	1371	1719
BA (ft^2/ac)	**68**	47	116	53	108	55	106	56	105	58	104	60	102	65	99	69	97
VOL (ft^3/ac)	**1500**	960	2460	1017	2200	1037	2140	1059	2083	1073	2050	1110	1976	1174	1881	1251	1799
BA (ft^2/ac)	**100**	36	137	42	123	44	120	46	117	47	115	50	111	55	106	61	101
VOL (ft^3/ac)	**2000**	918	2918	949	2532	963	2441	979	2353	990	2302	1021	2187	1079	2036	1156	1904
BA (ft^2/ac)	**132**	29	162	35	141	37	136	38	131	40	128	43	122	48	114	54	107
VOL (ft^3/ac)	**2500**	915	3415	919	2902	925	2779	935	2659	942	2589	965	2430	1012	2219	1082	2031
BA (ft^2/ac)	**164**	24	189	29	161	31	154	33	148	34	144	37	135	42	124	48	114
	SITE INDEX 60			PRESENT AGE 30				PRESENT HEIGHT 39.0 FT						HEIGHT IN 5 YEARS 44.7 FT			
VOL (ft^3/ac)	**1500**	1006	2506	1083	2266	1108	2211	1134	2159	1152	2128	1196	2061	1268	1975	1354	1902
BA (ft^2/ac)	**85**	36	122	42	110	44	108	46	105	47	104	49	101	54	97	59	93
VOL (ft^3/ac)	**2000**	934	2934	990	2573	1010	2489	1033	2407	1048	2360	1088	2254	1159	2116	1248	1997
BA (ft^2/ac)	**112**	29	142	35	125	37	121	38	117	39	115	42	110	47	103	53	98
VOL (ft^3/ac)	**2500**	903	3403	935	2918	950	2803	967	2691	979	2626	1013	2478	1076	2283	1162	2111
BA (ft^2/ac)	**139**	25	164	30	141	31	136	33	131	34	127	37	121	42	111	47	103
VOL (ft^3/ac)	**3000**	900	3900	908	3290	916	3144	927	3001	935	2917	961	2727	1014	2472	1093	2242
BA (ft^2/ac)	**166**	21	188	26	159	27	152	29	145	30	141	32	132	37	120	43	109
VOL (ft^3/ac)	**3500**	914	4414	899	3681	901	3504	906	3330	911	3227	928	2993	970	2677	1039	2388
BA (ft^2/ac)	**193**	18	212	22	177	24	169	25	161	26	156	29	145	33	130	39	116
	SITE INDEX 60			PRESENT AGE 35				PRESENT HEIGHT 44.7 FT						HEIGHT IN 5 YEARS 50.0 FT			
VOL (ft^3/ac)	**2000**	950	2950	1025	2607	1049	2528	1077	2451	1095	2406	1141	2307	1221	2178	1318	2067
BA (ft^2/ac)	**98**	29	127	34	113	36	110	37	106	39	104	41	100	46	95	51	90
VOL (ft^3/ac)	**2500**	900	3400	953	2936	972	2826	995	2720	1011	2658	1052	2518	1127	2334	1225	2173
BA (ft^2/ac)	**122**	24	146	29	127	31	122	32	118	33	115	36	109	40	101	46	95
VOL (ft^3/ac)	**3000**	877	3877	909	3291	923	3151	941	3015	953	2935	988	2753	1055	2512	1147	2296
BA (ft^2/ac)	**145**	21	166	25	142	27	136	28	130	29	127	32	119	36	109	42	100
VOL (ft^3/ac)	**3500**	874	4374	884	3667	893	3497	905	3330	914	3231	942	3007	999	2706	1084	2432
BA (ft^2/ac)	**169**	18	187	22	158	24	150	25	143	26	139	28	130	33	117	38	106
VOL (ft^3/ac)	**4000**	884	4884	874	4057	878	3856	885	3659	890	3542	910	3276	956	2914	1032	2581
BA (ft^2/ac)	**192**	16	209	20	174	21	166	22	157	23	152	25	141	29	126	35	112
VOL (ft^3/ac)	**4500**	905	5405	875	4458	873	4227	875	3999	878	3864	890	3555	925	3132	991	2739
BA (ft^2/ac)	**216**	14	231	18	191	19	181	20	172	21	166	23	153	27	135	32	119

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 60	PRESENT AGE 40						PRESENT HEIGHT 50.0 FT						HEIGHT IN 5 YEARS 55.1 FT			
VOL (ft^3/ac)	2500	891	3391	959	2942	982	2836	1009	2733	1027	2673	1074	2539	1156	2363	1261	2209
BA (ft^2/ac)	108	23	132	28	115	29	111	31	107	32	105	34	100	39	93	44	87
VOL (ft^3/ac)	3000	855	3855	903	3286	922	3150	944	3018	959	2941	1000	2766	1076	2533	1178	2326
BA (ft^2/ac)	129	20	150	24	128	26	123	27	118	28	115	31	109	35	100	40	92
VOL (ft^3/ac)	3500	840	4340	868	3651	882	3485	899	3323	911	3228	945	3011	1013	2720	1109	2457
BA (ft^2/ac)	151	18	169	21	142	23	136	24	130	25	126	27	118	31	107	36	97
VOL (ft^3/ac)	4000	838	4838	848	4031	856	3835	869	3643	878	3529	905	3271	963	2920	1051	2600
BA (ft^2/ac)	172	16	186	19	157	20	149	22	142	22	138	25	128	28	114	33	102
VOL (ft^3/ac)	4500	847	5347	839	4421	843	4196	850	3974	856	3843	877	3542	925	3132	1004	2752
BA (ft^2/ac)	193	14	207	17	172	18	163	19	155	20	150	22	138	26	122	31	108
VOL (ft^3/ac)	5000	863	5863	838	4821	838	4566	840	4314	843	4165	857	3823	895	3352	965	2913
BA (ft^2/ac)	214	13	227	16	187	17	177	18	168	18	162	20	149	24	131	28	114
	SITE INDEX 60	PRESENT AGE 45						PRESENT HEIGHT 55.1 FT						HEIGHT IN 5 YEARS 60.0 FT			
VOL (ft^3/ac)	3000	823	3823	881	3264	903	3131	927	3002	944	2926	989	2754	1070	2527	1177	2325
BA (ft^2/ac)	117	19	137	23	117	24	113	25	108	26	105	29	99	32	91	37	84
VOL (ft^3/ac)	3500	799	4299	839	3622	856	3460	876	3301	890	3207	929	2995	1002	2710	1104	2453
BA (ft^2/ac)	137	16	154	20	130	21	124	23	118	23	115	25	108	29	98	34	89
VOL (ft^3/ac)	4000	790	4790	813	3995	825	3803	840	3615	851	3503	884	3249	949	2906	1043	2592
BA (ft^2/ac)	156	15	171	18	143	19	136	20	129	21	126	23	117	27	105	31	94
VOL (ft^3/ac)	4500	791	5291	797	4380	805	4158	816	3940	824	3811	850	3516	906	3113	993	2741
BA (ft^2/ac)	175	13	188	16	156	17	149	18	141	19	136	21	126	24	112	29	99
VOL (ft^3/ac)	5000	799	5799	790	4773	794	4522	800	4274	806	4128	826	3791	872	3329	950	2899
BA (ft^2/ac)	194	12	206	15	170	16	161	17	153	17	148	19	136	22	119	27	104
VOL (ft^3/ac)	5500	813	6313	790	5172	789	4893	792	4616	795	4452	809	4074	846	3553	915	3064
BA (ft^2/ac)	213	11	224	13	184	14	174	15	165	16	159	18	146	21	127	25	110
VOL (ft^3/ac)	6000	832	6832	794	5577	790	5269	789	4963	790	4782	797	4363	826	3783	886	3234
BA (ft^2/ac)	232	10	242	12	198	13	188	14	177	15	170	16	156	19	135	23	116
	SITE INDEX 60	PRESENT AGE 50						PRESENT HEIGHT 60.0 FT						HEIGHT IN 5 YEARS 64.6 FT			
VOL (ft^3/ac)	3500	745	4245	790	3573	808	3411	829	3253	844	3160	884	2949	959	2666	1062	2411
BA (ft^2/ac)	125	15	141	18	119	19	114	20	108	21	105	23	99	26	89	31	81
VOL (ft^3/ac)	4000	731	4731	760	3943	774	3752	791	3565	803	3455	837	3203	904	2861	1001	2549
BA (ft^2/ac)	143	13	157	16	131	17	125	18	119	19	115	21	107	24	96	28	85
VOL (ft^3/ac)	4500	727	5227	741	4324	751	4105	764	3888	773	3760	801	3467	860	3067	949	2698
BA (ft^2/ac)	161	12	173	15	143	15	136	16	129	17	125	19	115	22	102	26	90
VOL (ft^3/ac)	5000	731	5731	731	4714	737	4465	746	4220	753	4074	775	3741	825	3282	906	2854
BA (ft^2/ac)	178	11	189	13	156	14	148	15	140	16	135	17	124	20	109	24	95
VOL (ft^3/ac)	5500	740	6240	727	5110	729	4833	734	4559	739	4396	756	4021	797	3504	869	3018
BA (ft^2/ac)	196	10	206	12	169	13	160	14	151	14	146	16	133	19	117	22	101
VOL (ft^3/ac)	6000	754	6754	728	5511	727	5206	728	4903	731	4723	742	4308	776	3733	839	3188
BA (ft^2/ac)	213	9	223	11	182	12	172	13	162	13	156	15	143	17	124	21	106
VOL (ft^3/ac)	6500	771	7271	734	5916	729	5583	727	5251	727	5054	733	4599	759	3966	814	3363
BA (ft^2/ac)	231	8	240	10	195	11	184	12	174	12	167	14	152	16	132	19	112
VOL (ft^3/ac)	7000	792	7792	742	6325	734	5963	729	5603	727	5389	729	4894	746	4204	793	3542
BA (ft^2/ac)	248	8	256	10	209	10	197	11	185	11	178	13	162	15	139	18	118

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 60			PRESENT AGE 55				PRESENT HEIGHT 64.6 FT				HEIGHT IN 5 YEARS 69.0 FT					
VOL (ft^3/ac)	3500	668	4168	712	3495	729	3333	749	3174	763	3080	801	2867	873	2580	972	2320
BA (ft^2/ac)	116	13	130	15	109	16	104	17	99	18	96	20	90	23	81	26	73
VOL (ft^3/ac)	4000	654	4654	683	3866	696	3675	713	3487	724	3376	757	3122	821	2778	913	2462
BA (ft^2/ac)	133	11	144	14	120	14	114	15	109	16	105	18	98	20	87	24	77
VOL (ft^3/ac)	4500	649	5149	665	4248	674	4028	687	3811	696	3682	723	3388	779	2986	864	2612
BA (ft^2/ac)	149	10	159	12	132	13	125	14	119	14	115	16	106	19	93	22	82
VOL (ft^3/ac)	5000	651	5651	654	4637	660	4389	669	4143	676	3997	697	3663	745	3202	822	2771
BA (ft^2/ac)	165	9	175	11	144	12	136	13	129	13	124	15	114	17	100	20	87
VOL (ft^3/ac)	5500	658	6158	649	5032	652	4756	657	4482	662	4319	679	3944	719	3426	788	2936
BA (ft^2/ac)	182	8	190	10	156	11	147	12	139	12	134	13	123	16	107	19	92
VOL (ft^3/ac)	6000	670	6670	649	5432	649	5127	651	4825	654	4646	665	4231	698	3655	759	3107
BA (ft^2/ac)	198	7	206	9	168	10	159	11	150	11	144	12	131	15	114	18	97
VOL (ft^3/ac)	6500	684	7184	653	5836	650	5503	649	5173	650	4976	656	4522	682	3889	735	3283
BA (ft^2/ac)	214	7	222	9	180	9	170	10	160	10	154	11	140	14	121	17	102
VOL (ft^3/ac)	7000	702	7702	660	6243	654	5882	650	5524	649	5311	651	4817	670	4127	715	3463
BA (ft^2/ac)	231	6	238	8	193	9	182	9	171	10	164	11	149	13	128	16	108
VOL (ft^3/ac)	7500	721	8221	669	6652	660	6264	654	5878	651	5648	649	5115	661	4368	699	3647
BA (ft^2/ac)	247	6	253	7	205	8	194	9	182	9	175	10	158	12	136	15	114
	SITE INDEX 60			PRESENT AGE 60				PRESENT HEIGHT 69.0 FT				HEIGHT IN 5 YEARS 73.1 FT					
VOL (ft^3/ac)	4000	552	4552	574	3757	584	3563	598	3372	607	3259	634	3000	688	2645	768	2317
BA (ft^2/ac)	124	8	133	10	110	11	105	12	99	12	96	14	89	16	78	19	69
VOL (ft^3/ac)	4500	550	5050	560	4143	567	3921	577	3701	584	3571	606	3272	653	2860	725	2474
BA (ft^2/ac)	140	8	148	9	121	10	115	11	109	11	105	12	96	14	84	17	73
VOL (ft^3/ac)	5000	554	5554	552	4535	556	4285	563	4037	568	3890	585	3551	625	3082	690	2638
BA (ft^2/ac)	155	7	162	8	133	9	126	10	118	10	114	11	104	13	91	16	78
VOL (ft^3/ac)	5500	562	6062	550	4933	551	4655	555	4379	558	4215	570	3836	603	3310	660	2809
BA (ft^2/ac)	170	6	177	8	144	8	136	9	128	9	124	10	113	12	97	15	83
VOL (ft^3/ac)	6000	573	6573	551	5334	550	5029	551	4725	552	4544	560	4126	586	3543	636	2984
BA (ft^2/ac)	185	6	192	7	156	8	147	8	138	8	133	9	121	11	104	14	88
VOL (ft^3/ac)	6500	587	7087	556	5739	552	5406	550	5074	550	4877	554	4420	573	3780	616	3164
BA (ft^2/ac)	201	5	206	7	168	7	158	7	148	8	143	9	129	10	111	13	93
VOL (ft^3/ac)	7000	603	7603	563	6146	557	5785	552	5427	551	5212	551	4716	563	4021	599	3348
BA (ft^2/ac)	216	5	221	6	179	6	169	7	159	7	152	8	138	10	118	12	99
VOL (ft^3/ac)	7500	621	8121	573	6556	564	6167	557	5781	554	5550	550	5016	557	4264	586	3535
BA (ft^2/ac)	231	4	236	6	191	6	180	6	169	7	162	8	147	9	125	11	104
VOL (ft^3/ac)	8000	641	8641	584	6967	573	6551	563	6138	559	5890	551	5317	553	4510	576	3724
BA (ft^2/ac)	247	4	251	5	203	6	191	6	179	6	172	7	155	9	132	11	109
VOL (ft^3/ac)	8500	661	9161	596	7379	583	6936	571	6496	565	6232	555	5620	550	4758	567	3916
BA (ft^2/ac)	262	4	266	5	215	5	202	6	189	6	182	7	164	8	139	10	115

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 65	PRESENT AGE 20						PRESENT HEIGHT 29.3 FT						HEIGHT IN 5 YEARS 35.9 FT			
VOL (ft^3/ac)	**1000**	1078	2078	1143	1926	1163	1891	1184	1858	1198	1840	1232	1798	1288	1746	1353	1702
BA (ft^2/ac)	**78**	48	126	55	117	57	115	59	114	60	112	63	110	68	107	73	104
VOL (ft^3/ac)	**1500**	1001	2501	1040	2223	1055	2159	1073	2097	1084	2061	1115	1981	1171	1878	1241	1789
BA (ft^2/ac)	**114**	37	151	44	135	46	131	48	128	49	125	52	121	58	115	64	110
VOL (ft^3/ac)	**2000**	989	2989	996	2579	1003	2482	1013	2387	1021	2333	1043	2209	1089	2047	1155	1904
BA (ft^2/ac)	**150**	30	180	36	156	38	150	40	145	41	141	44	134	50	125	56	116
	SITE INDEX 65	PRESENT AGE 25						PRESENT HEIGHT 35.9 FT						HEIGHT IN 5 YEARS 42.3 FT			
VOL (ft^3/ac)	**1500**	1054	2554	1121	2304	1144	2247	1168	2192	1184	2161	1225	2091	1294	2001	1376	1924
BA (ft^2/ac)	**93**	38	131	44	119	46	116	48	113	49	111	52	108	57	103	62	100
VOL (ft^3/ac)	**2000**	998	2998	1041	2623	1057	2536	1077	2451	1090	2402	1126	2292	1191	2148	1275	2023
BA (ft^2/ac)	**122**	31	153	37	135	38	130	40	126	42	123	45	118	50	111	56	105
VOL (ft^3/ac)	**2500**	984	3484	999	2982	1009	2863	1022	2746	1032	2678	1060	2525	1115	2322	1194	2143
BA (ft^2/ac)	**151**	26	177	31	152	33	146	34	141	36	137	39	130	44	120	50	111
VOL (ft^3/ac)	**3000**	998	3998	985	3367	988	3216	994	3068	999	2981	1018	2783	1061	2518	1131	2279
BA (ft^2/ac)	**180**	22	203	27	172	28	164	30	157	31	152	34	142	39	129	45	117
	SITE INDEX 65	PRESENT AGE 30						PRESENT HEIGHT 42.3 FT						HEIGHT IN 5 YEARS 48.4 FT			
VOL (ft^3/ac)	**2000**	1021	3021	1088	2671	1112	2590	1138	2512	1155	2466	1200	2365	1277	2234	1372	2121
BA (ft^2/ac)	**103**	31	135	36	120	38	116	40	113	41	111	44	106	49	101	54	96
VOL (ft^3/ac)	**2500**	979	3479	1023	3006	1040	2894	1061	2786	1076	2722	1115	2580	1186	2393	1280	2229
BA (ft^2/ac)	**128**	26	155	31	134	33	129	34	125	36	122	38	116	43	108	49	100
VOL (ft^3/ac)	**3000**	966	3966	986	3368	997	3226	1012	3086	1023	3005	1054	2820	1117	2574	1205	2354
BA (ft^2/ac)	**153**	22	176	27	150	28	144	30	138	31	134	34	126	38	115	44	106
VOL (ft^3/ac)	**3500**	973	4473	969	3752	974	3578	983	3407	990	3307	1013	3079	1064	2772	1144	2493
BA (ft^2/ac)	**178**	19	198	24	167	25	159	27	152	28	147	30	137	35	124	40	112
VOL (ft^3/ac)	**4000**	994	4994	967	4149	966	3945	969	3743	972	3624	987	3352	1026	2983	1096	2644
BA (ft^2/ac)	**203**	17	221	21	184	22	175	24	166	25	161	27	149	31	133	37	118
	SITE INDEX 65	PRESENT AGE 35						PRESENT HEIGHT 48.4 FT						HEIGHT IN 5 YEARS 54.2 FT			
VOL (ft^3/ac)	**2500**	978	3478	1042	3025	1065	2919	1092	2816	1109	2756	1156	2622	1238	2446	1343	2292
BA (ft^2/ac)	**112**	25	138	30	120	32	116	34	112	35	110	37	105	42	98	47	92
VOL (ft^3/ac)	**3000**	946	3946	989	3372	1007	3235	1028	3102	1043	3024	1083	2849	1158	2615	1260	2409
BA (ft^2/ac)	**134**	22	156	26	134	28	129	29	123	30	120	33	114	37	105	43	97
VOL (ft^3/ac)	**3500**	935	4435	957	3740	969	3573	985	3409	996	3313	1029	3095	1096	2803	1191	2539
BA (ft^2/ac)	**156**	19	175	23	148	25	142	26	135	27	132	29	123	34	112	39	102
VOL (ft^3/ac)	**4000**	940	4940	940	4123	947	3926	957	3732	965	3617	991	3357	1047	3004	1134	2682
BA (ft^2/ac)	**177**	17	195	21	163	22	155	23	148	24	144	27	133	31	120	36	107
VOL (ft^3/ac)	**4500**	954	5454	935	4518	937	4290	942	4066	947	3933	964	3630	1009	3217	1087	2835
BA (ft^2/ac)	**199**	15	215	19	179	20	170	21	161	22	156	24	144	28	128	33	113
VOL (ft^3/ac)	**5000**	977	5977	939	4922	936	4664	936	4410	937	4259	948	3913	982	3439	1048	2997
BA (ft^2/ac)	**221**	14	235	17	194	18	184	19	174	20	168	22	155	26	137	31	119

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 65	PRESENT AGE 40						PRESENT HEIGHT 54.2 FT						HEIGHT IN 5 YEARS 59.7 FT			
VOL (ft^3/ac)	**3000**	922	3922	981	3364	1002	3231	1028	3102	1045	3027	1091	2857	1175	2632	1285	2433
BA (ft^2/ac)	**119**	21	141	25	121	27	117	28	112	29	109	31	103	35	95	40	88
VOL (ft^3/ac)	**3500**	899	4399	938	3721	955	3558	975	3400	990	3306	1029	3095	1105	2813	1210	2559
BA (ft^2/ac)	**139**	18	158	22	134	24	128	25	122	26	119	28	112	32	102	37	93
VOL (ft^3/ac)	**4000**	891	4891	911	4094	923	3902	939	3713	950	3602	983	3349	1050	3007	1148	2696
BA (ft^2/ac)	**158**	16	175	20	147	21	140	22	134	23	130	25	121	29	109	34	98
VOL (ft^3/ac)	**4500**	895	5395	897	4480	904	4257	914	4039	923	3909	949	3614	1006	3213	1095	2844
BA (ft^2/ac)	**178**	15	193	18	161	19	153	20	145	21	140	23	130	27	116	32	103
VOL (ft^3/ac)	**5000**	907	5907	892	4874	894	4623	900	4374	905	4227	924	3890	971	3428	1051	3000
BA (ft^2/ac)	**197**	13	211	16	175	17	166	18	157	19	152	21	140	25	123	29	108
VOL (ft^3/ac)	**5500**	925	6425	893	5276	891	4995	893	4717	895	4552	908	4173	945	3652	1015	3164
BA (ft^2/ac)	**217**	12	229	15	189	16	179	17	169	18	163	19	150	23	131	27	114
VOL (ft^3/ac)	**6000**	949	6949	901	5684	895	5373	892	5066	891	4883	897	4463	925	3882	985	3334
BA (ft^2/ac)	**236**	11	248	14	203	15	192	16	181	16	175	18	160	21	139	25	120
	SITE INDEX 65	PRESENT AGE 45						PRESENT HEIGHT 59.7 FT						HEIGHT IN 5 YEARS 65.0 FT			
VOL (ft^3/ac)	**3500**	851	4351	901	3684	920	3524	943	3368	959	3276	1002	3068	1083	2790	1193	2542
BA (ft^2/ac)	**126**	17	143	21	122	22	117	23	111	24	109	26	102	30	93	34	85
VOL (ft^3/ac)	**4000**	837	4837	868	4051	883	3862	902	3676	915	3566	952	3317	1024	2981	1128	2676
BA (ft^2/ac)	**144**	15	159	18	134	19	128	21	121	21	118	23	110	27	99	31	89
VOL (ft^3/ac)	**4500**	833	5333	848	4431	858	4212	872	3997	883	3869	913	3579	977	3184	1073	2821
BA (ft^2/ac)	**161**	13	175	17	146	18	139	19	132	19	128	21	118	25	106	29	94
VOL (ft^3/ac)	**5000**	838	5838	837	4820	843	4572	853	4327	860	4182	884	3850	939	3396	1026	2975
BA (ft^2/ac)	**179**	12	192	15	159	16	151	17	143	18	138	19	127	23	112	27	99
VOL (ft^3/ac)	**5500**	849	6349	833	5216	835	4939	840	4665	845	4502	863	4129	909	3616	987	3136
BA (ft^2/ac)	**197**	11	208	14	171	15	162	16	154	16	148	18	136	21	120	25	104
VOL (ft^3/ac)	**6000**	865	6865	835	5618	833	5312	834	5009	837	4828	849	4414	885	3842	954	3303
BA (ft^2/ac)	**214**	10	225	13	184	13	175	14	165	15	159	17	145	20	127	23	109
VOL (ft^3/ac)	**6500**	885	7385	841	6024	836	5689	833	5357	833	5160	839	4705	867	4074	927	3475
BA (ft^2/ac)	**232**	9	242	12	198	12	187	13	176	14	170	15	155	18	134	22	115
VOL (ft^3/ac)	**7000**	909	7909	851	6434	842	6071	836	5710	834	5495	834	5000	853	4310	904	3653
BA (ft^2/ac)	**249**	9	259	11	211	12	199	12	187	13	180	14	164	17	142	21	121

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 65			PRESENT AGE 50				PRESENT HEIGHT 65.0 FT						HEIGHT IN 5 YEARS 70.0 FT			
VOL (ft^3/ac)	**3500**	783	4283	835	3618	855	3459	878	3303	894	3211	938	3004	1019	2726	1128	2476
BA (ft^2/ac)	**116**	15	131	18	111	19	106	20	102	21	99	23	93	26	84	30	77
VOL (ft^3/ac)	**4000**	765	4765	801	3984	817	3795	836	3610	849	3501	887	3253	960	2917	1063	2611
BA (ft^2/ac)	**132**	13	146	16	122	17	116	18	111	19	108	21	100	24	90	28	81
VOL (ft^3/ac)	**4500**	758	5258	779	4362	790	4144	805	3930	816	3803	848	3513	912	3119	1008	2757
BA (ft^2/ac)	**148**	12	160	14	133	15	127	16	120	17	117	19	108	22	96	26	85
VOL (ft^3/ac)	**5000**	759	5759	765	4748	773	4502	784	4258	792	4114	818	3784	874	3331	962	2910
BA (ft^2/ac)	**164**	11	176	13	145	14	138	15	130	15	126	17	116	20	102	24	90
VOL (ft^3/ac)	**5500**	766	6266	759	5142	763	4866	770	4594	776	4433	796	4061	843	3550	922	3071
BA (ft^2/ac)	**181**	10	191	12	157	13	149	14	140	14	136	16	124	18	109	22	95
VOL (ft^3/ac)	**6000**	778	6778	758	5541	758	5237	762	4936	765	4757	780	4345	819	3776	889	3238
BA (ft^2/ac)	**197**	9	206	11	169	12	160	13	151	13	145	15	133	17	116	21	100
VOL (ft^3/ac)	**6500**	794	7294	761	5944	758	5612	758	5282	759	5086	769	4634	800	4007	862	3410
BA (ft^2/ac)	**213**	8	222	10	181	11	171	12	161	12	155	14	142	16	123	19	105
VOL (ft^3/ac)	**7000**	813	7813	768	6351	762	5990	758	5633	758	5419	762	4927	785	4242	839	3587
BA (ft^2/ac)	**229**	8	237	10	193	10	182	11	172	11	165	13	150	15	130	18	110
VOL (ft^3/ac)	**7500**	834	8334	778	6761	768	6372	762	5986	759	5756	758	5224	774	4481	819	3768
BA (ft^2/ac)	**245**	7	253	9	206	10	194	10	182	11	175	12	159	14	137	17	116
	SITE INDEX 65			PRESENT AGE 55				PRESENT HEIGHT 70.0 FT						HEIGHT IN 5 YEARS 74.7 FT			
VOL (ft^3/ac)	**4000**	668	4668	701	3884	715	3693	732	3506	744	3396	778	3144	845	2802	940	2489
BA (ft^2/ac)	**123**	11	134	13	111	14	106	15	101	15	98	17	91	19	81	23	72
VOL (ft^3/ac)	**4500**	662	5162	681	4263	691	4045	704	3829	714	3701	743	3408	801	3008	889	2638
BA (ft^2/ac)	**138**	9	148	12	122	12	116	13	110	14	106	15	98	18	87	21	76
VOL (ft^3/ac)	**5000**	663	5663	669	4651	675	4404	685	4159	693	4014	716	3681	766	3223	846	2795
BA (ft^2/ac)	**153**	9	162	11	133	11	126	12	119	13	115	14	106	16	93	20	81
VOL (ft^3/ac)	**5500**	669	6169	663	5046	666	4770	673	4497	678	4335	696	3961	738	3446	811	2959
BA (ft^2/ac)	**168**	8	176	10	144	10	136	11	129	12	124	13	114	15	99	18	85
VOL (ft^3/ac)	**6000**	680	6680	662	5445	662	5141	665	4839	668	4660	681	4247	716	3674	781	3129
BA (ft^2/ac)	**183**	7	190	9	156	10	147	10	138	11	133	12	122	14	106	17	90
VOL (ft^3/ac)	**6500**	694	7194	665	5848	662	5516	662	5186	663	4990	671	4537	699	3906	755	3304
BA (ft^2/ac)	**198**	7	205	8	167	9	158	9	148	10	143	11	130	13	112	16	95
VOL (ft^3/ac)	**7000**	710	7710	671	6254	665	5894	662	5537	662	5323	665	4831	686	4143	734	3483
BA (ft^2/ac)	**213**	6	219	8	178	8	168	9	158	9	152	10	138	12	119	15	100
VOL (ft^3/ac)	**7500**	729	8229	680	6662	671	6275	665	5890	663	5660	662	5128	676	4383	717	3666
BA (ft^2/ac)	**228**	6	234	7	190	8	179	8	168	9	162	10	147	11	126	14	105
VOL (ft^3/ac)	**8000**	750	8750	690	7073	679	6658	671	6245	667	5998	662	5428	669	4626	703	3851
BA (ft^2/ac)	**243**	5	249	7	201	7	190	8	178	8	171	9	155	11	132	13	111
VOL (ft^3/ac)	**8500**	772	9272	703	7486	689	7043	678	6602	673	6339	664	5729	665	4872	691	4040
BA (ft^2/ac)	**258**	5	263	6	213	7	201	7	188	8	181	8	164	10	139	12	116

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 65			PRESENT AGE 60				PRESENT HEIGHT 74.7 FT						HEIGHT IN 5 YEARS 79.1 FT			
VOL (ft^3/ac)	4500	538	5038	545	4128	551	3905	560	3684	567	3553	587	3253	631	2838	700	2449
BA (ft^2/ac)	129	7	136	8	112	9	106	9	100	10	96	11	88	13	77	15	67
VOL (ft^3/ac)	5000	542	5542	539	4521	542	4270	547	4022	552	3874	568	3533	604	3061	666	2615
BA (ft^2/ac)	143	6	149	7	122	8	116	8	109	9	105	10	96	12	83	14	71
VOL (ft^3/ac)	5500	551	6051	537	4920	538	4641	540	4365	543	4200	554	3820	584	3291	638	2787
BA (ft^2/ac)	157	5	163	7	133	7	125	8	118	8	114	9	104	11	89	13	76
VOL (ft^3/ac)	6000	564	6564	540	5323	537	5016	537	4712	538	4530	545	4111	568	3525	615	2964
BA (ft^2/ac)	171	5	177	6	144	7	135	7	127	7	122	8	111	10	96	12	81
VOL (ft^3/ac)	6500	578	7078	545	5728	540	5394	538	5062	537	4864	540	4406	556	3764	596	3145
BA (ft^2/ac)	185	4	190	6	154	6	145	7	137	7	131	8	119	9	102	11	86
VOL (ft^3/ac)	7000	595	7595	553	6136	546	5775	541	5415	539	5200	537	4703	548	4005	581	3329
BA (ft^2/ac)	199	4	204	5	165	6	156	6	146	6	140	7	127	8	108	10	90
VOL (ft^3/ac)	7500	614	8114	563	6546	554	6157	546	5770	542	5539	537	5003	542	4249	569	3517
BA (ft^2/ac)	213	4	218	5	176	5	166	6	155	6	149	7	135	8	115	10	95
VOL (ft^3/ac)	8000	633	8633	575	6958	563	6542	553	6127	548	5880	540	5305	539	4496	559	3707
BA (ft^2/ac)	228	4	232	5	187	5	176	5	165	6	158	6	143	7	122	9	101
VOL (ft^3/ac)	8500	654	9154	588	7371	574	6927	562	6486	555	6222	543	5609	537	4744	551	3900
BA (ft^2/ac)	242	3	246	4	198	5	186	5	174	5	167	6	151	7	128	9	106
VOL (ft^3/ac)	9000	676	9676	602	7785	586	7314	571	6846	564	6565	549	5914	537	4995	546	4094
BA (ft^2/ac)	256	3	259	4	209	4	197	5	184	5	177	5	159	7	135	8	111

TABLE 10 (continued)

	Stand before thinning	0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	Percent thinning																
	SITE INDEX 70	PRESENT AGE 20						PRESENT HEIGHT 31.5 FT						HEIGHT IN 5 YEARS 38.7 FT			
VOL (ft^3/ac)	**1000**	1179	2179	1251	2034	1272	2001	1296	1970	1310	1952	1347	1913	1406	1864	1474	1822
BA (ft^2/ac)	**72**	50	123	57	115	59	113	61	111	62	111	65	108	69	106	74	103
VOL (ft^3/ac)	**1500**	1086	2586	1135	2318	1153	2256	1173	2197	1186	2163	1221	2086	1281	1988	1356	1905
BA (ft^2/ac)	**105**	39	145	46	130	48	127	50	124	51	122	54	118	60	112	66	108
VOL (ft^3/ac)	**2000**	1061	3061	1078	2661	1089	2567	1102	2476	1111	2423	1139	2304	1192	2149	1264	2013
BA (ft^2/ac)	**139**	32	171	38	149	40	144	42	139	43	136	46	130	52	121	58	114
VOL (ft^3/ac)	**2500**	1077	3577	1061	3044	1063	2917	1068	2793	1073	2720	1090	2556	1130	2337	1194	2143
BA (ft^2/ac)	**172**	26	199	32	170	33	163	35	156	37	152	40	143	45	131	52	121
	SITE INDEX 70	PRESENT AGE 25						PRESENT HEIGHT 38.7 FT						HEIGHT IN 5 YEARS 45.5 FT			
VOL (ft^3/ac)	**1500**	1150	2650	1227	2410	1252	2356	1279	2303	1296	2273	1341	2207	1414	2121	1501	2049
BA (ft^2/ac)	**86**	40	126	46	115	48	112	50	110	51	109	54	106	58	102	64	98
VOL (ft^3/ac)	**2000**	1081	3081	1135	2717	1154	2633	1177	2551	1192	2504	1233	2398	1304	2261	1394	2142
BA (ft^2/ac)	**113**	32	146	38	129	40	125	42	122	43	119	46	114	51	108	57	103
VOL (ft^3/ac)	**2500**	1056	3556	1082	3065	1096	2949	1112	2836	1124	2771	1157	2623	1220	2427	1307	2256
BA (ft^2/ac)	**140**	27	168	33	145	34	140	36	135	37	132	40	125	45	116	52	108
VOL (ft^3/ac)	**3000**	1060	4060	1059	3442	1065	3294	1075	3149	1082	3064	1106	2872	1159	2616	1238	2386
BA (ft^2/ac)	**168**	23	191	28	163	30	156	32	149	33	145	36	136	40	125	47	114
VOL (ft^3/ac)	**3500**	1085	4585	1056	3839	1055	3659	1058	3482	1061	3378	1075	3141	1115	2822	1183	2532
BA (ft^2/ac)	**195**	20	216	25	181	26	173	28	165	29	160	32	149	36	134	43	121
	SITE INDEX 70	PRESENT AGE 30						PRESENT HEIGHT 45.5 FT						HEIGHT IN 5 YEARS 52.1 FT			
VOL (ft^3/ac)	**2000**	1110	3110	1188	2771	1214	2693	1243	2618	1262	2574	1311	2477	1395	2352	1496	2245
BA (ft^2/ac)	**96**	32	129	38	115	40	112	41	109	42	107	45	103	50	98	55	94
VOL (ft^3/ac)	**2500**	1057	3557	1112	3095	1133	2987	1157	2882	1174	2821	1218	2684	1297	2504	1399	2347
BA (ft^2/ac)	**119**	27	147	32	128	34	124	36	120	37	117	40	112	44	104	50	98
VOL (ft^3/ac)	**3000**	1035	4035	1066	3449	1081	3309	1099	3174	1112	3094	1149	2915	1220	2677	1318	2466
BA (ft^2/ac)	**142**	23	166	28	142	30	137	31	131	32	128	35	121	40	111	46	103
VOL (ft^3/ac)	**3500**	1034	4534	1041	3824	1050	3654	1062	3487	1072	3389	1101	3166	1161	2868	1251	2600
BA (ft^2/ac)	**165**	20	186	25	158	26	151	28	144	29	140	32	131	36	119	42	108
VOL (ft^3/ac)	**4000**	1049	5049	1032	4215	1035	4014	1041	3816	1047	3699	1067	3433	1116	3073	1197	2745
BA (ft^2/ac)	**189**	18	207	22	173	24	165	25	157	26	153	28	142	33	127	38	114
VOL (ft^3/ac)	**4500**	1074	5574	1036	4618	1032	4386	1033	4157	1035	4022	1047	3712	1083	3290	1153	2901
BA (ft^2/ac)	**212**	16	228	20	190	21	180	23	171	23	166	26	153	30	136	35	120
	SITE INDEX 70	PRESENT AGE 35						PRESENT HEIGHT 52.1 FT						HEIGHT IN 5 YEARS 58.4 FT			
VOL (ft^3/ac)	**2500**	1057	3557	1133	3115	1159	3012	1188	2913	1208	2854	1259	2725	1348	2556	1460	2409
BA (ft^2/ac)	**104**	26	131	31	115	33	111	35	108	36	106	38	101	43	95	48	90
VOL (ft^3/ac)	**3000**	1016	4016	1070	3453	1091	3320	1116	3190	1133	3115	1178	2944	1262	2719	1372	2520
BA (ft^2/ac)	**124**	23	148	27	127	29	122	30	118	31	115	34	109	38	101	44	94
VOL (ft^3/ac)	**3500**	998	4498	1031	3813	1046	3650	1065	3490	1079	3396	1118	3183	1192	2900	1297	2646
BA (ft^2/ac)	**145**	20	165	24	140	26	134	27	129	28	125	31	118	35	107	40	98
VOL (ft^3/ac)	**4000**	996	4996	1007	4190	1017	3996	1031	3805	1042	3693	1073	3438	1138	3095	1235	2783
BA (ft^2/ac)	**165**	18	183	22	154	23	147	24	140	25	136	28	127	32	114	37	103
VOL (ft^3/ac)	**4500**	1006	5506	997	4579	1001	4355	1010	4134	1017	4004	1040	3706	1095	3302	1182	2931
BA (ft^2/ac)	**185**	16	201	20	168	21	160	22	152	23	147	25	136	29	122	34	108
VOL (ft^3/ac)	**5000**	1024	6024	996	4979	995	4724	998	4473	1002	4324	1018	3984	1062	3519	1139	3088
BA (ft^2/ac)	**205**	14	220	18	182	19	173	20	164	21	159	23	146	27	130	32	114
VOL (ft^3/ac)	**5500**	1049	6549	1002	5385	997	5101	995	4819	996	4653	1004	4270	1037	3744	1104	3252
BA (ft^2/ac)	**225**	13	239	16	197	17	187	18	177	19	171	21	157	25	138	30	120

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 70	PRESENT AGE 40						PRESENT HEIGHT 58.4 FT						HEIGHT IN 5 YEARS 64.3 FT			
VOL (ft^3/ac)	**3000**	988	3988	1057	3440	1082	3310	1110	3185	1129	3111	1180	2946	1271	2728	1388	2537
BA (ft^2/ac)	**111**	22	133	26	115	27	111	29	107	30	104	32	99	36	92	41	85
VOL (ft^3/ac)	**3500**	958	4458	1007	3790	1027	3631	1051	3475	1067	3384	1112	3178	1196	2903	1309	2658
BA (ft^2/ac)	**129**	19	148	23	126	24	121	26	116	26	113	29	106	33	97	38	89
VOL (ft^3/ac)	**4000**	945	4945	975	4157	989	3968	1008	3782	1021	3673	1060	3425	1135	3092	1242	2790
BA (ft^2/ac)	**147**	17	164	21	139	22	132	23	126	24	123	26	115	30	104	35	94
VOL (ft^3/ac)	**4500**	943	5443	955	4538	965	4318	978	4103	989	3976	1020	3686	1085	3293	1185	2933
BA (ft^2/ac)	**165**	15	181	19	151	20	144	21	137	22	133	24	123	27	110	32	98
VOL (ft^3/ac)	**5000**	951	5951	945	4928	950	4679	959	4433	966	4288	991	3956	1046	3503	1137	3085
BA (ft^2/ac)	**183**	14	197	17	164	18	156	19	148	20	143	22	132	25	117	30	103
VOL (ft^3/ac)	**5500**	966	6466	943	5326	943	5047	948	4772	952	4609	970	4235	1015	3722	1096	3245
BA (ft^2/ac)	**201**	12	214	15	177	16	168	17	159	18	153	20	141	23	124	28	109
VOL (ft^3/ac)	**6000**	986	6986	947	5730	943	5422	943	5117	945	4936	955	4521	991	3948	1062	3411
BA (ft^2/ac)	**219**	11	231	14	190	15	180	16	170	17	164	19	150	22	132	26	114
VOL (ft^3/ac)	**6500**	1011	7511	956	6139	948	5802	944	5468	943	5269	947	4813	973	4180	1034	3583
BA (ft^2/ac)	**237**	11	248	13	203	14	192	15	181	16	175	17	160	20	139	25	120
	SITE INDEX 70	PRESENT AGE 45						PRESENT HEIGHT 64.3 FT						HEIGHT IN 5 YEARS 70.0 FT			
VOL (ft^3/ac)	**3500**	901	4401	959	3741	980	3584	1006	3430	1024	3340	1071	3137	1158	2866	1275	2624
BA (ft^2/ac)	**117**	17	135	21	115	22	110	23	105	24	103	26	97	30	88	34	81
VOL (ft^3/ac)	**4000**	881	4881	921	4104	938	3917	959	3734	974	3626	1015	3381	1095	3052	1206	2755
BA (ft^2/ac)	**133**	15	149	19	126	20	120	21	115	22	111	24	104	27	94	31	85
VOL (ft^3/ac)	**4500**	873	5373	896	4479	909	4263	926	4050	938	3924	972	3638	1043	3250	1147	2896
BA (ft^2/ac)	**150**	14	164	17	137	18	130	19	124	20	120	21	112	25	100	29	89
VOL (ft^3/ac)	**5000**	875	5875	881	4864	890	4618	902	4376	911	4233	940	3905	1001	3458	1097	3045
BA (ft^2/ac)	**166**	12	179	15	149	16	141	17	134	18	130	20	120	23	106	27	94
VOL (ft^3/ac)	**5500**	883	6383	874	5257	878	4982	886	4711	893	4550	915	4181	967	3675	1054	3203
BA (ft^2/ac)	**182**	11	194	14	160	15	152	16	144	16	139	18	128	21	113	25	99
VOL (ft^3/ac)	**6000**	897	6897	873	5656	873	5352	877	5051	881	4873	897	4463	940	3898	1018	3367
BA (ft^2/ac)	**199**	10	210	13	172	14	163	15	154	15	149	17	136	20	119	24	103
VOL (ft^3/ac)	**6500**	914	7414	877	6060	873	5727	873	5397	875	5202	885	4751	919	4126	988	3537
BA (ft^2/ac)	**215**	10	225	12	185	13	175	14	165	14	159	16	145	18	126	22	109
VOL (ft^3/ac)	**7000**	936	7936	885	6468	878	6106	874	5748	873	5535	877	5043	903	4360	962	3711
BA (ft^2/ac)	**232**	9	241	11	197	12	186	13	175	13	169	15	154	17	133	21	114
VOL (ft^3/ac)	**7500**	960	8460	896	6879	885	6489	878	6102	875	5871	873	5339	891	4598	941	3890
BA (ft^2/ac)	**248**	8	257	10	209	11	197	12	186	12	179	14	163	16	141	20	119

TABLE 10 (continued)

	Stand before thinning	0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 70			PRESENT AGE 50				PRESENT HEIGHT 70.0 FT						HEIGHT IN 5 YEARS 75.4 FT			
VOL (ft^3/ac)	**4000**	794	4794	835	4018	852	3831	873	3648	888	3540	928	3294	1006	2963	1114	2662
BA (ft^2/ac)	**123**	13	136	16	114	17	109	18	104	18	101	20	94	23	85	27	76
VOL (ft^3/ac)	**4500**	784	5284	810	4393	823	4177	840	3964	852	3838	886	3552	955	3162	1056	2805
BA (ft^2/ac)	**138**	12	150	14	125	15	119	16	113	17	109	18	101	21	90	25	80
VOL (ft^3/ac)	**5000**	783	5783	794	4777	803	4532	816	4290	825	4147	854	3819	914	3371	1008	2956
BA (ft^2/ac)	**153**	10	164	13	135	14	129	15	122	15	118	17	109	20	96	23	85
VOL (ft^3/ac)	**5500**	788	6288	785	5168	791	4894	799	4624	806	4463	829	4095	881	3588	966	3115
BA (ft^2/ac)	**168**	10	178	12	146	13	139	13	131	14	127	16	116	18	102	22	89
VOL (ft^3/ac)	**6000**	798	6798	782	5565	784	5263	789	4963	794	4786	811	4377	854	3812	931	3280
BA (ft^2/ac)	**183**	9	192	11	158	12	149	12	141	13	136	14	124	17	108	20	94
VOL (ft^3/ac)	**6500**	813	7313	784	5967	782	5636	784	5308	786	5113	798	4664	833	4040	901	3450
BA (ft^2/ac)	**198**	8	206	10	169	11	159	12	150	12	145	13	132	16	115	19	98
VOL (ft^3/ac)	**7000**	830	7830	790	6372	785	6013	782	5657	783	5445	789	4955	817	4274	876	3625
BA (ft^2/ac)	**213**	8	221	9	180	10	170	11	160	11	154	12	140	15	121	18	103
VOL (ft^3/ac)	**7500**	850	8350	798	6781	790	6393	785	6009	783	5780	784	5250	804	4511	855	3804
BA (ft^2/ac)	**228**	7	235	9	192	9	181	10	170	10	164	12	149	14	128	17	108
VOL (ft^3/ac)	**8000**	873	8873	809	7192	798	6776	789	6364	786	6117	782	5548	795	4752	838	3986
BA (ft^2/ac)	**243**	7	250	8	203	9	191	9	180	10	173	11	157	13	135	16	113
VOL (ft^3/ac)	**8500**	897	9397	822	7605	808	7162	797	6721	791	6458	783	5849	788	4996	823	4172
BA (ft^2/ac)	**258**	6	265	8	215	8	202	9	190	9	182	10	165	12	142	15	119
	SITE INDEX 70			PRESENT AGE 55				PRESENT HEIGHT 75.4 FT						HEIGHT IN 5 YEARS 80.5 FT			
VOL (ft^3/ac)	**4500**	666	5166	685	4268	696	4049	709	3834	719	3706	748	3414	808	3015	897	2645
BA (ft^2/ac)	**128**	9	137	11	114	12	108	12	102	13	99	14	91	17	81	20	71
VOL (ft^3/ac)	**5000**	666	5666	673	4656	680	4408	690	4164	697	4019	721	3687	772	3229	853	2802
BA (ft^2/ac)	**142**	8	150	10	124	11	117	11	111	12	107	13	98	15	86	18	75
VOL (ft^3/ac)	**5500**	673	6173	667	5050	670	4774	677	4501	682	4339	701	3966	744	3451	817	2966
BA (ft^2/ac)	**156**	7	163	9	134	10	127	10	120	11	115	12	106	14	92	17	79
VOL (ft^3/ac)	**6000**	683	6683	665	5448	666	5145	669	4843	673	4664	686	4252	722	3679	787	3135
BA (ft^2/ac)	**170**	7	177	8	144	9	137	10	129	10	124	11	113	13	98	16	84
VOL (ft^3/ac)	**6500**	697	7197	668	5851	666	5519	666	5190	667	4994	676	4541	704	3911	761	3310
BA (ft^2/ac)	**184**	6	190	8	155	8	146	9	138	9	133	10	121	12	104	15	88
VOL (ft^3/ac)	**7000**	713	7713	674	6257	669	5897	666	5540	665	5327	669	4835	691	4148	740	3489
BA (ft^2/ac)	**198**	6	204	7	166	8	156	8	147	9	141	10	128	11	110	14	93
VOL (ft^3/ac)	**7500**	732	8232	682	6665	674	6278	669	5893	666	5663	666	5132	681	4388	722	3671
BA (ft^2/ac)	**212**	5	217	7	176	7	166	8	156	8	150	9	136	11	117	13	98
VOL (ft^3/ac)	**8000**	752	8752	693	7076	682	6661	674	6248	670	6002	665	5431	673	4631	708	3856
BA (ft^2/ac)	**226**	5	231	6	187	7	176	7	165	8	159	8	144	10	123	12	103
VOL (ft^3/ac)	**8500**	774	9274	706	7488	692	7046	681	6605	676	6342	667	5733	669	4876	696	4045
BA (ft^2/ac)	**240**	5	245	6	198	6	186	7	175	7	168	8	152	9	129	12	108
VOL (ft^3/ac)	**9000**	797	9797	720	7902	704	7432	690	6964	683	6685	670	6036	666	5123	687	4235
BA (ft^2/ac)	**254**	4	258	6	209	6	196	6	184	7	177	7	160	9	136	11	113
VOL (ft^3/ac)	**9500**	821	10321	735	8318	717	7820	700	7325	692	7029	676	6341	665	5373	679	4428
BA (ft^2/ac)	**268**	4	272	5	220	6	207	6	194	6	186	7	168	8	142	11	118

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 70	PRESENT AGE 60						PRESENT HEIGHT 80.5 FT						HEIGHT IN 5 YEARS 85.2 FT			
VOL (ft^3/ac)	**5000**	517	5517	508	4490	509	4238	513	3987	516	3838	528	3494	559	3016	613	2562
BA (ft^2/ac)	**133**	5	138	6	113	6	106	7	100	7	97	8	88	10	76	12	65
VOL (ft^3/ac)	**5500**	528	6028	509	4892	508	4611	508	4333	510	4167	518	3783	541	3249	588	2737
BA (ft^2/ac)	**146**	4	151	6	123	6	116	6	109	7	105	7	95	9	82	11	69
VOL (ft^3/ac)	**6000**	542	6542	513	5296	510	4988	508	4682	508	4499	511	4077	529	3486	568	2917
BA (ft^2/ac)	**159**	4	163	5	133	5	125	6	117	6	113	7	102	8	88	10	74
VOL (ft^3/ac)	**6500**	559	7059	521	5704	515	5368	510	5034	508	4835	508	4374	519	3726	552	3101
BA (ft^2/ac)	**172**	4	176	5	143	5	134	5	126	6	121	6	110	8	94	9	78
VOL (ft^3/ac)	**7000**	577	7577	530	6113	522	5750	515	5389	512	5173	508	4673	513	3970	539	3288
BA (ft^2/ac)	**185**	3	189	4	153	5	144	5	135	5	130	6	117	7	100	9	83
VOL (ft^3/ac)	**7500**	596	8096	542	6525	531	6134	522	5746	517	5514	509	4975	509	4217	529	3478
BA (ft^2/ac)	**198**	3	202	4	163	4	153	5	144	5	138	5	125	7	106	8	88
VOL (ft^3/ac)	**8000**	617	8617	555	6937	542	6520	530	6104	524	5856	513	5279	508	4465	521	3670
BA (ft^2/ac)	**211**	3	215	4	173	4	163	4	153	5	146	5	132	6	112	8	92
VOL (ft^3/ac)	**8500**	639	9139	569	7351	554	6907	540	6464	533	6199	518	5584	508	4715	515	3864
BA (ft^2/ac)	**224**	3	228	3	183	4	172	4	161	4	155	5	140	6	118	7	97
VOL (ft^3/ac)	**9000**	662	9662	584	7767	567	7295	551	6825	542	6544	525	5891	509	4967	511	4060
BA (ft^2/ac)	**238**	3	241	3	194	4	182	4	170	4	163	4	147	5	124	7	102
VOL (ft^3/ac)	**9500**	685	10185	600	8183	581	7684	563	7187	553	6890	533	6198	512	5219	509	4258
BA (ft^2/ac)	**251**	2	253	3	204	3	192	4	179	4	172	4	155	5	131	6	107
VOL (ft^3/ac)	**10000**	709	10709	616	8599	595	8074	576	7550	565	7236	541	6507	516	5473	508	4456
BA (ft^2/ac)	**264**	2	266	3	214	3	201	3	188	4	181	4	163	5	137	6	112

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 75	PRESENT AGE 20						PRESENT HEIGHT 33.8 FT						HEIGHT IN 5 YEARS 41.5 FT			
VOL (ft^3/ac)	**1000**	1282	2282	1360	2143	1383	2112	1408	2082	1424	2066	1463	2029	1525	1982	1594	1943
BA (ft^2/ac)	**67**	52	120	59	113	60	111	62	110	64	109	66	107	71	105	76	103
VOL (ft^3/ac)	**1500**	1174	2674	1232	2415	1252	2355	1274	2299	1289	2266	1327	2193	1393	2100	1472	2021
BA (ft^2/ac)	**98**	41	140	48	127	49	124	52	121	53	119	56	115	61	111	67	107
VOL (ft^3/ac)	**2000**	1135	3135	1163	2746	1177	2655	1193	2567	1204	2516	1236	2402	1295	2253	1374	2123
BA (ft^2/ac)	**130**	33	163	39	143	41	139	43	134	45	132	48	126	53	118	60	112
VOL (ft^3/ac)	**2500**	1141	3641	1136	3119	1141	2995	1150	2874	1157	2803	1178	2644	1226	2433	1298	2247
BA (ft^2/ac)	**161**	28	189	33	162	35	156	37	150	38	146	42	138	47	128	54	118
	SITE INDEX 75	PRESENT AGE 25						PRESENT HEIGHT 41.5 FT						HEIGHT IN 5 YEARS 48.8 FT			
VOL (ft^3/ac)	**2000**	1166	3166	1230	2813	1253	2732	1279	2653	1296	2607	1340	2506	1418	2375	1513	2262
BA (ft^2/ac)	**106**	34	140	40	125	42	121	44	118	45	116	48	111	53	106	58	101
VOL (ft^3/ac)	**2500**	1130	3630	1168	3151	1184	3038	1204	2929	1218	2865	1256	2722	1327	2534	1421	2370
BA (ft^2/ac)	**131**	29	160	34	139	36	134	38	130	39	127	42	121	47	113	53	106
VOL (ft^3/ac)	**3000**	1126	4126	1135	3518	1145	3374	1158	3233	1168	3150	1198	2963	1258	2715	1346	2495
BA (ft^2/ac)	**156**	25	181	30	155	31	149	33	143	34	139	37	131	42	120	48	111
VOL (ft^3/ac)	**3500**	1143	4643	1125	3908	1127	3731	1133	3558	1139	3456	1159	3225	1207	2914	1286	2634
BA (ft^2/ac)	**182**	21	204	26	172	28	164	29	157	30	152	33	142	38	129	44	117
VOL (ft^3/ac)	**4000**	1175	5175	1130	4313	1126	4104	1125	3899	1126	3778	1136	3502	1171	3128	1238	2786
BA (ft^2/ac)	**207**	19	227	23	189	25	180	26	172	27	166	30	154	34	138	40	124
	SITE INDEX 75	PRESENT AGE 30						PRESENT HEIGHT 48.8 FT						HEIGHT IN 5 YEARS 55.8 FT			
VOL (ft^3/ac)	**2500**	1136	3636	1203	3186	1227	3081	1255	2979	1273	2920	1322	2788	1408	2615	1516	2465
BA (ft^2/ac)	**111**	28	140	34	123	35	119	37	115	38	113	41	108	46	101	51	96
VOL (ft^3/ac)	**3000**	1105	4105	1148	3531	1166	3395	1188	3263	1203	3185	1246	3011	1324	2781	1430	2579
BA (ft^2/ac)	**133**	24	158	29	136	31	131	33	126	34	123	36	116	41	108	47	100
VOL (ft^3/ac)	**3500**	1097	4597	1115	3898	1128	3731	1144	3568	1155	3472	1190	3255	1259	2966	1358	2707
BA (ft^2/ac)	**154**	21	176	26	150	27	144	29	137	30	134	33	126	37	115	43	105
VOL (ft^3/ac)	**4000**	1105	5105	1100	4283	1106	4085	1116	3890	1124	3776	1150	3516	1208	3165	1298	2847
BA (ft^2/ac)	**176**	19	195	23	164	25	157	26	150	27	145	30	135	34	122	40	110
VOL (ft^3/ac)	**4500**	1126	5626	1098	4680	1098	4451	1101	4226	1106	4092	1123	3789	1169	3376	1249	2998
BA (ft^2/ac)	**198**	17	215	21	179	22	171	24	162	25	157	27	146	31	130	37	116
VOL (ft^3/ac)	**5000**	1155	6155	1105	5088	1099	4828	1097	4571	1098	4420	1107	4072	1140	3598	1209	3158
BA (ft^2/ac)	**219**	15	235	19	195	20	185	22	175	22	170	25	156	29	139	34	122
	SITE INDEX 75	PRESENT AGE 35						PRESENT HEIGHT 55.8 FT						HEIGHT IN 5 YEARS 62.5 FT			
VOL (ft^3/ac)	**3000**	1087	4087	1152	3535	1176	3405	1204	3278	1223	3205	1273	3039	1364	2821	1482	2630
BA (ft^2/ac)	**116**	24	140	28	122	30	117	31	113	32	110	35	105	39	97	44	91
VOL (ft^3/ac)	**3500**	1061	4561	1105	3888	1124	3727	1146	3571	1162	3479	1206	3272	1289	2996	1402	2751
BA (ft^2/ac)	**135**	21	156	25	133	26	128	28	123	29	120	31	113	36	103	41	95
VOL (ft^3/ac)	**4000**	1053	5053	1075	4258	1088	4067	1106	3880	1118	3770	1155	3520	1228	3185	1335	2883
BA (ft^2/ac)	**154**	18	173	23	146	24	139	25	133	26	129	29	121	33	110	38	100
VOL (ft^3/ac)	**4500**	1058	5558	1059	4642	1067	4420	1079	4203	1088	4075	1117	3782	1180	3387	1278	3026
BA (ft^2/ac)	**173**	17	190	20	159	22	151	23	144	24	140	26	130	30	117	35	104

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 75	PRESENT AGE 35						PRESENT HEIGHT 55.8 FT						HEIGHT IN 5 YEARS 62.5 FT			
VOL (ft^3/ac)	**5000**	1072	6072	1053	5036	1056	4784	1062	4536	1068	4390	1089	4055	1142	3599	1230	3179
BA (ft^2/ac)	**191**	15	207	19	172	20	164	21	155	22	150	24	139	28	124	33	110
VOL (ft^3/ac)	**5500**	1093	6593	1056	5438	1053	5157	1054	4879	1057	4714	1071	4337	1112	3819	1190	3339
BA (ft^2/ac)	**210**	14	225	17	186	18	176	19	167	20	161	22	149	26	131	31	115
VOL (ft^3/ac)	**6000**	1121	7121	1065	5847	1057	5536	1053	5228	1053	5045	1059	4625	1090	4047	1157	3506
BA (ft^2/ac)	**229**	13	242	16	199	17	189	18	179	18	172	20	158	24	139	29	121
	SITE INDEX 75	PRESENT AGE 40						PRESENT HEIGHT 62.5 FT						HEIGHT IN 5 YEARS 68.9 FT			
VOL (ft^3/ac)	**3500**	1016	4516	1075	3858	1098	3701	1125	3549	1143	3459	1192	3258	1283	2990	1404	2753
BA (ft^2/ac)	**120**	19	140	23	120	25	115	26	111	27	108	29	102	33	94	38	86
VOL (ft^3/ac)	**4000**	997	4997	1037	4219	1054	4033	1076	3850	1091	3743	1134	3500	1217	3174	1332	2881
BA (ft^2/ac)	**137**	17	155	21	131	22	125	23	120	24	117	27	109	30	99	35	90
VOL (ft^3/ac)	**4500**	991	5491	1012	4595	1025	4378	1041	4166	1054	4040	1090	3755	1163	3370	1271	3020
BA (ft^2/ac)	**154**	15	170	19	143	20	136	21	130	22	126	24	117	28	105	33	94
VOL (ft^3/ac)	**5000**	995	5995	997	4980	1005	4734	1017	4492	1027	4348	1056	4021	1119	3577	1219	3168
BA (ft^2/ac)	**171**	14	185	17	154	18	147	19	139	20	135	22	125	26	111	30	99
VOL (ft^3/ac)	**5500**	1006	6506	992	5374	995	5098	1002	4826	1008	4665	1030	4296	1084	3791	1175	3323
BA (ft^2/ac)	**188**	13	201	16	166	17	158	18	150	19	145	21	133	24	118	28	104
VOL (ft^3/ac)	**6000**	1024	7024	992	5775	991	5470	994	5168	997	4989	1013	4578	1056	4014	1137	3486
BA (ft^2/ac)	**205**	12	217	15	179	16	169	17	160	17	155	19	142	22	125	27	109
VOL (ft^3/ac)	**6500**	1046	7546	998	6181	993	5847	991	5515	992	5319	1001	4866	1035	4242	1106	3654
BA (ft^2/ac)	**221**	11	233	14	191	14	181	15	171	16	165	18	151	21	132	25	114
VOL (ft^3/ac)	**7000**	1072	8072	1009	6592	999	6228	993	5868	991	5653	994	5160	1018	4475	1079	3828
BA (ft^2/ac)	**238**	10	249	13	204	13	193	14	182	15	175	17	160	20	139	24	119
	SITE INDEX 75	PRESENT AGE 45						PRESENT HEIGHT 68.9 FT						HEIGHT IN 5 YEARS 75.0 FT			
VOL (ft^3/ac)	**4000**	922	4922	970	4153	989	3968	1013	3787	1029	3681	1074	3440	1160	3117	1277	2826
BA (ft^2/ac)	**124**	15	140	19	119	20	113	21	108	22	105	24	99	27	89	31	81
VOL (ft^3/ac)	**4500**	911	5411	941	4524	956	4310	975	4099	988	3975	1027	3693	1104	3311	1215	2964
BA (ft^2/ac)	**140**	14	154	17	129	18	123	19	117	20	114	22	106	25	95	29	85
VOL (ft^3/ac)	**5000**	909	5909	923	4905	933	4662	948	4422	958	4280	991	3956	1058	3516	1162	3110
BA (ft^2/ac)	**155**	12	168	15	140	16	133	17	126	18	122	20	113	23	101	27	89
VOL (ft^3/ac)	**5500**	914	6414	912	5295	919	5022	929	4753	937	4594	963	4228	1021	3729	1116	3265
BA (ft^2/ac)	**170**	11	182	14	151	15	143	16	135	17	131	18	121	21	107	25	94
VOL (ft^3/ac)	**6000**	926	6926	909	5692	911	5390	917	5091	922	4914	942	4508	991	3949	1077	3426
BA (ft^2/ac)	**186**	10	197	13	162	14	153	15	145	15	140	17	129	20	113	24	98
VOL (ft^3/ac)	**6500**	942	7442	910	6093	909	5762	910	5435	913	5240	927	4793	968	4175	1044	3593
BA (ft^2/ac)	**201**	10	211	12	173	13	164	14	155	14	149	16	137	19	119	22	103
VOL (ft^3/ac)	**7000**	961	7961	916	6499	911	6139	909	5783	909	5571	917	5083	949	4406	1016	3765
BA (ft^2/ac)	**216**	9	226	11	185	12	174	13	164	13	158	15	145	17	126	21	108
VOL (ft^3/ac)	**7500**	984	8484	925	6908	916	6520	911	6135	909	5906	911	5377	934	4641	992	3941
BA (ft^2/ac)	**231**	8	240	10	196	11	185	12	174	12	168	14	153	16	132	20	113
VOL (ft^3/ac)	**8000**	1009	9009	938	7321	925	6904	916	6490	912	6244	909	5674	924	4881	973	4121
BA (ft^2/ac)	**247**	8	255	10	208	10	196	11	184	12	177	13	161	15	139	19	118

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 75	PRESENT AGE 50						PRESENT HEIGHT 75.0 FT						HEIGHT IN 5 YEARS 80.8 FT			
VOL (ft^3/ac)	4500	804	5304	834	4416	848	4201	866	3990	879	3865	915	3581	988	3195	1093	2841
BA (ft^2/ac)	128	11	140	14	117	15	111	16	106	16	103	18	95	21	85	24	76
VOL (ft^3/ac)	5000	801	5801	816	4799	826	4555	840	4314	850	4172	881	3846	945	3402	1042	2991
BA (ft^2/ac)	142	10	153	13	127	13	121	14	114	15	111	16	102	19	91	23	80
VOL (ft^3/ac)	5500	805	6305	805	5188	812	4916	822	4646	830	4486	854	4120	910	3617	999	3148
BA (ft^2/ac)	156	9	166	12	137	12	130	13	123	14	119	15	109	18	96	21	84
VOL (ft^3/ac)	6000	814	6814	801	5584	804	5283	810	4984	815	4807	834	4400	881	3839	962	3311
BA (ft^2/ac)	171	9	180	11	147	11	140	12	132	13	127	14	117	16	102	20	88
VOL (ft^3/ac)	6500	827	7327	802	5984	801	5654	803	5328	807	5133	820	4686	859	4066	931	3480
BA (ft^2/ac)	185	8	193	10	158	11	149	11	141	12	136	13	124	15	108	19	93
VOL (ft^3/ac)	7000	844	7844	806	6389	802	6030	801	5675	802	5464	810	4976	841	4298	905	3653
BA (ft^2/ac)	199	7	206	9	168	10	159	10	150	11	144	12	132	14	114	17	97
VOL (ft^3/ac)	7500	863	8363	813	6796	806	6410	802	6026	801	5798	804	5270	827	4535	882	3831
BA (ft^2/ac)	213	7	220	9	179	9	169	10	159	10	153	11	139	13	120	16	102
VOL (ft^3/ac)	8000	884	8884	824	7206	813	6792	806	6380	803	6134	801	5567	817	4774	864	4012
BA (ft^2/ac)	227	6	234	8	190	9	179	9	168	10	162	11	147	13	126	16	106
VOL (ft^3/ac)	8500	908	9408	836	7619	823	7176	812	6736	807	6474	801	5867	809	5016	848	4197
BA (ft^2/ac)	241	6	247	8	201	8	189	9	178	9	171	10	155	12	133	15	111
VOL (ft^3/ac)	9000	933	9933	850	8033	834	7563	821	7095	814	6816	803	6169	804	5261	835	4384
BA (ft^2/ac)	255	6	261	7	211	8	199	8	187	9	180	10	163	11	139	14	116
	SITE INDEX 75	PRESENT AGE 55						PRESENT HEIGHT 80.8 FT						HEIGHT IN 5 YEARS 86.2 FT			
VOL (ft^3/ac)	5000	660	5660	665	4648	671	4400	681	4155	688	4010	711	3677	761	3218	840	2789
BA (ft^2/ac)	132	7	140	9	115	10	109	10	103	11	100	12	91	14	80	17	70
VOL (ft^3/ac)	5500	667	6167	659	5042	663	4766	669	4493	674	4331	691	3957	733	3440	805	2953
BA (ft^2/ac)	145	7	152	8	125	9	118	9	111	10	107	11	98	13	86	16	74
VOL (ft^3/ac)	6000	677	6677	659	5441	659	5137	662	4836	665	4656	677	4243	712	3669	775	3124
BA (ft^2/ac)	158	6	165	8	135	8	127	9	120	9	115	10	105	12	91	14	78
VOL (ft^3/ac)	6500	691	7191	662	5845	659	5513	659	5183	660	4987	668	4533	695	3902	750	3299
BA (ft^2/ac)	171	6	177	7	145	7	136	8	128	8	124	9	112	11	97	14	82
VOL (ft^3/ac)	7000	708	7708	668	6251	662	5891	659	5533	658	5320	662	4827	682	4139	729	3478
BA (ft^2/ac)	184	5	190	7	154	7	146	7	137	8	132	9	120	10	103	13	87
VOL (ft^3/ac)	7500	727	8227	677	6660	668	6272	662	5887	660	5657	659	5125	672	4379	712	3661
BA (ft^2/ac)	197	5	203	6	164	6	155	7	146	7	140	8	127	10	109	12	91
VOL (ft^3/ac)	8000	748	8748	688	7071	677	6655	668	6242	664	5996	659	5424	665	4623	698	3847
BA (ft^2/ac)	211	4	215	6	174	6	164	7	154	7	148	8	134	9	115	11	96
VOL (ft^3/ac)	8500	770	9270	701	7483	687	7041	675	6600	670	6336	661	5726	661	4868	687	4035
BA (ft^2/ac)	224	4	228	5	185	6	174	6	163	6	157	7	142	9	121	11	100
VOL (ft^3/ac)	9000	793	9793	715	7898	699	7427	685	6959	677	6679	664	6030	659	5116	678	4226
BA (ft^2/ac)	237	4	241	5	195	5	183	6	172	6	165	7	149	8	127	10	105
VOL (ft^3/ac)	9500	817	10317	730	8313	712	7815	695	7320	686	7023	670	6335	658	5366	671	4419
BA (ft^2/ac)	250	4	254	5	205	5	193	5	181	6	173	6	157	8	133	10	110
VOL (ft^3/ac)	10000	843	10843	747	8730	726	8205	707	7681	697	7369	676	6642	660	5617	666	4614
BA (ft^2/ac)	263	4	267	4	215	5	202	5	189	5	182	6	164	7	139	9	114

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 75			PRESENT AGE 60				PRESENT HEIGHT 86 2 FT				HEIGHT IN 5 YEARS 91 3 FT					
VOL (ft^3/ac)	5500	490	5990	462	4845	458	4562	456	4280	455	4112	457	3723	472	3179	505	2654
BA (ft^2/ac)	136	3	140	4	113	4	107	5	100	5	96	5	87	7	75	8	63
VOL (ft^3/ac)	6000	507	6507	470	5253	464	4942	459	4633	457	4449	455	4021	463	3421	490	2839
BA (ft^2/ac)	148	3	152	4	123	4	116	4	108	4	104	5	94	6	80	7	67
VOL (ft^3/ac)	6500	526	7026	481	5664	472	5326	465	4989	461	4788	456	4322	458	3665	479	3027
BA (ft^2/ac)	161	3	164	3	132	4	124	4	117	4	112	5	101	6	86	7	71
VOL (ft^3/ac)	7000	547	7547	493	6076	482	5711	473	5347	468	5129	459	4625	456	3913	470	3219
BA (ft^2/ac)	173	2	176	3	142	3	133	4	125	4	120	4	108	5	92	6	76
VOL (ft^3/ac)	7500	568	8068	507	6490	494	6097	482	5706	476	5472	464	4929	455	4163	464	3412
BA (ft^2/ac)	185	2	188	3	151	3	142	3	133	4	128	4	115	5	98	6	80
VOL (ft^3/ac)	8000	591	8591	522	6904	507	6485	493	6067	485	5817	470	5236	457	4414	459	3608
BA (ft^2/ac)	197	2	200	3	161	3	151	3	141	3	136	4	122	5	103	6	85
VOL (ft^3/ac)	8500	614	9114	538	7320	520	6874	505	6429	496	6162	478	5543	459	4667	457	3805
BA (ft^2/ac)	209	2	212	2	170	3	160	3	150	3	144	3	129	4	109	5	89
VOL (ft^3/ac)	9000	638	9638	554	7737	535	7264	517	6792	507	6509	486	5852	463	4921	455	4004
BA (ft^2/ac)	222	2	224	2	180	3	169	3	158	3	152	3	137	4	115	5	94
VOL (ft^3/ac)	9500	663	10163	572	8155	551	7654	531	7155	520	6857	496	6161	469	5176	455	4204
BA (ft^2/ac)	234	2	236	2	190	2	178	3	167	3	160	3	144	4	121	5	99
VOL (ft^3/ac)	10000	688	10688	590	8573	567	8046	545	7520	533	7205	506	6472	475	5432	457	4405
BA (ft^2/ac)	246	2	248	2	199	2	187	2	175	3	168	3	151	4	127	5	103
VOL (ft^3/ac)	10500	713	11213	608	8991	584	8437	560	7885	547	7554	517	6783	481	5689	459	4607
BA (ft^2/ac)	258	1	260	2	209	2	196	2	183	2	176	3	158	3	133	4	108
VOL (ft^3/ac)	11000	739	11739	627	9410	601	8830	576	8250	561	7903	529	7094	489	5946	462	4810
BA (ft^2/ac)	271	1	272	2	219	2	205	2	192	2	184	3	165	3	139	4	112

TABLE 10 (continued)

	Stand before thinning	0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	Percent thinning																
	SITE INDEX 80	PRESENT AGE 20						PRESENT HEIGHT 36.1 FT						HEIGHT IN 5 YEARS 44.2 FT			
VOL (ft^3/ac)	**1500**	1263	2763	1331	2513	1353	2456	1378	2402	1394	2370	1435	2301	1505	2212	1588	2137
BA (ft^2/ac)	**92**	43	135	49	123	51	121	53	118	54	117	58	113	63	109	68	105
VOL (ft^3/ac)	**2000**	1213	3213	1251	2834	1267	2746	1286	2660	1299	2611	1335	2501	1401	2358	1486	2234
BA (ft^2/ac)	**121**	35	157	41	139	43	134	45	130	46	128	50	123	55	116	61	110
VOL (ft^3/ac)	**2500**	1208	3708	1213	3196	1222	3075	1234	2958	1242	2889	1269	2735	1324	2531	1404	2352
BA (ft^2/ac)	**151**	29	180	35	156	37	150	39	145	40	141	43	134	49	124	55	116
VOL (ft^3/ac)	**3000**	1234	4234	1206	3589	1206	3434	1209	3284	1213	3195	1229	2995	1271	2728	1340	2489
BA (ft^2/ac)	**180**	25	205	30	175	32	167	34	160	35	156	38	146	43	134	50	122
	SITE INDEX 80	PRESENT AGE 25						PRESENT HEIGHT 44.2 FT						HEIGHT IN 5 YEARS 52.1 FT			
VOL (ft^3/ac)	**2000**	1253	3253	1328	2911	1353	2832	1382	2756	1400	2712	1449	2615	1532	2489	1633	2382
BA (ft^2/ac)	**99**	35	135	41	121	43	118	45	115	46	113	49	109	54	104	60	99
VOL (ft^3/ac)	**2500**	1207	3707	1256	3239	1275	3129	1298	3023	1314	2961	1357	2822	1435	2642	1536	2484
BA (ft^2/ac)	**123**	30	153	36	134	37	130	39	125	40	123	43	117	48	110	54	104
VOL (ft^3/ac)	**3000**	1194	4194	1214	3597	1227	3456	1244	3318	1256	3238	1290	3056	1359	2816	1455	2604
BA (ft^2/ac)	**147**	26	173	31	149	33	143	34	137	36	134	38	127	43	117	50	108
VOL (ft^3/ac)	**3500**	1203	4703	1196	3979	1202	3806	1212	3636	1220	3536	1245	3311	1302	3009	1389	2738
BA (ft^2/ac)	**170**	23	193	27	164	29	157	31	150	32	146	34	137	39	125	45	114
VOL (ft^3/ac)	**4000**	1229	5229	1195	4378	1194	4172	1196	3971	1200	3852	1216	3581	1259	3216	1336	2885
BA (ft^2/ac)	**194**	20	215	24	180	26	172	27	164	28	159	31	148	36	133	42	120
	SITE INDEX 80	PRESENT AGE 30						PRESENT HEIGHT 52.1 FT						HEIGHT IN 5 YEARS 59.5 FT			
VOL (ft^3/ac)	**2500**	1217	3717	1295	3278	1322	3176	1353	3077	1373	3020	1426	2892	1518	2726	1633	2582
BA (ft^2/ac)	**104**	29	134	35	119	36	115	38	111	39	1099	42	105	47	99	52	94
VOL (ft^3/ac)	**3000**	1177	4177	1231	3614	1253	3481	1278	3352	1295	3277	1343	3108	1429	2886	1542	2691
BA (ft^2/ac)	**124**	25	150	31	130	32	126	34	121	35	119	38	113	42	105	48	98
VOL (ft^3/ac)	**3500**	1162	4662	1191	3974	1207	3810	1226	3651	1240	3557	1280	3345	1357	3064	1465	2814
BA (ft^2/ac)	**145**	22	168	27	143	29	137	30	132	31	128	34	121	38	111	44	102
VOL (ft^3/ac)	**4000**	1164	5164	1169	4352	1179	4157	1192	3966	1202	3854	1234	3599	1300	3257	1401	2949
BA (ft^2/ac)	**165**	20	185	24	157	26	150	27	143	28	139	31	130	35	118	41	107
VOL (ft^3/ac)	**4500**	1179	5679	1161	4744	1164	4518	1172	4296	1178	4165	1201	3867	1256	3463	1347	3095
BA (ft^2/ac)	**185**	18	204	22	170	23	162	25	155	26	150	28	139	32	125	38	112
VOL (ft^3/ac)	**5000**	1204	6204	1164	5146	1161	4889	1162	4636	1165	4487	1179	4145	1222	3680	1302	3251
BA (ft^2/ac)	**205**	16	222	20	185	21	176	23	167	23	161	26	149	30	133	35	118
VOL (ft^3/ac)	**5500**	1236	6736	1174	5557	1166	5270	1161	4986	1161	4818	1167	4432	1197	3905	1265	3414
BA (ft^2/ac)	**226**	15	241	18	199	19	189	21	179	22	173	24	159	28	141	33	123

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 80	PRESENT AGE 35						PRESENT HEIGHT 59.5 FT						HEIGHT IN 5 YEARS 66.7 FT			
VOL (ft^3/ac)	**3000**	1158	4158	1234	3617	1261	3489	1292	3366	1312	3294	1368	3133	1465	2922	1589	2738
BA (ft^2/ac)	**109**	24	134	29	116	31	112	32	109	33	106	36	101	40	95	45	89
VOL (ft^3/ac)	**3500**	1125	4625	1179	3962	1201	3805	1227	3651	1245	3562	1294	3359	1384	3091	1506	2854
BA (ft^2/ac)	**126**	21	148	26	127	27	122	29	118	30	115	32	108	36	100	42	92
VOL (ft^3/ac)	**4000**	1111	5111	1143	4326	1160	4138	1180	3955	1195	3847	1236	3602	1318	3275	1434	2982
BA (ft^2/ac)	**144**	19	164	23	139	25	133	26	127	27	124	29	116	33	106	39	96
VOL (ft^3/ac)	**4500**	1110	5610	1122	4705	1133	4486	1148	4272	1159	4146	1193	3859	1265	3472	1372	3121
BA (ft^2/ac)	**162**	17	179	21	151	22	144	24	137	24	133	27	124	31	112	36	101
VOL (ft^3/ac)	**5000**	1120	6120	1111	5094	1117	4845	1126	4601	1134	4456	1161	4127	1222	3679	1320	3269
BA (ft^2/ac)	**179**	16	196	19	163	20	155	22	148	22	143	25	133	28	118	34	106
VOL (ft^3/ac)	**5500**	1138	6638	1109	5492	1110	5213	1114	4938	1119	4776	1138	4404	1188	3895	1276	3425
BA (ft^2/ac)	**197**	14	212	18	176	19	167	20	158	21	153	23	141	26	125	31	110
VOL (ft^3/ac)	**6000**	1162	7162	1115	5898	1110	5589	1109	5284	1111	5103	1122	4688	1162	4119	1239	3588
BA (ft^2/ac)	**215**	13	229	16	189	17	179	18	169	19	163	21	150	25	132	29	116
VOL (ft^3/ac)	**6500**	1191	7691	1126	6309	1116	5970	1111	5635	1109	5436	1113	4979	1142	4349	1209	3757
BA (ft^2/ac)	**233**	12	245	15	202	16	191	17	180	18	174	20	160	23	140	28	121
	SITE INDEX 80	PRESENT AGE 40						PRESENT HEIGHT 66.7 FT						HEIGHT IN 5 YEARS 73.5 FT			
VOL (ft^3/ac)	**4000**	1048	5048	1097	4280	1117	4096	1142	3916	1159	3811	1206	3572	1296	3253	1419	2968
BA (ft^2/ac)	**129**	18	147	21	125	23	119	24	114	25	111	27	104	31	95	35	87
VOL (ft^3/ac)	**4500**	1038	5538	1067	4650	1083	4436	1102	4227	1116	4103	1157	3823	1238	3445	1354	3103
BA (ft^2/ac)	**144**	16	161	19	135	20	129	22	123	23	120	25	112	28	101	33	91
VOL (ft^3/ac)	**5000**	1038	6038	1049	5032	1059	4788	1074	4548	1085	4407	1119	4084	1190	3647	1298	3247
BA (ft^2/ac)	**160**	14	175	18	146	19	139	20	132	21	128	23	119	26	107	31	95
VOL (ft^3/ac)	**5500**	1046	6546	1039	5422	1045	5149	1055	4879	1063	4720	1090	4355	1151	3858	1250	3399
BA (ft^2/ac)	**176**	13	190	16	157	17	150	18	142	19	137	21	127	24	113	29	99
VOL (ft^3/ac)	**6000**	1061	7061	1037	5820	1038	5517	1043	5217	1048	5040	1068	4634	1120	4077	1210	3558
BA (ft^2/ac)	**192**	12	204	15	169	16	160	17	152	18	146	19	135	23	119	27	104
VOL (ft^3/ac)	**6500**	1080	7580	1040	6223	1037	5890	1038	5562	1040	5367	1053	4919	1095	4302	1175	3723
BA (ft^2/ac)	**208**	11	219	14	180	15	171	16	161	16	156	18	143	21	125	25	109
VOL (ft^3/ac)	**7000**	1104	8104	1048	6631	1041	6269	1037	5911	1037	5699	1043	5209	1075	4532	1145	3894
BA (ft^2/ac)	**223**	10	234	13	192	14	182	15	171	15	165	17	151	20	132	24	114
VOL (ft^3/ac)	**7500**	1131	8631	1060	7043	1049	6652	1041	6265	1038	6035	1038	5504	1060	4768	1121	4069
BA (ft^2/ac)	**239**	10	249	12	204	13	193	14	182	14	175	16	160	19	139	23	119
VOL (ft^3/ac)	**8000**	1161	9161	1075	7458	1060	7038	1048	6622	1042	6374	1037	5802	1050	5007	1100	4249
BA (ft^2/ac)	**255**	9	265	11	216	12	204	13	192	14	185	15	168	18	145	22	124

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 80			PRESENT AGE 45				PRESENT HEIGHT 73.5 FT				HEIGHT IN 5 YEARS 80.0 FT					
VOL (ft^3/ac)	4500	944	5444	981	4564	998	4352	1019	4143	1034	4021	1076	3742	1158	3366	1275	3024
BA (ft^2/ac)	131	14	145	17	122	18	116	19	111	20	108	21	100	25	90	29	81
VOL (ft^3/ac)	5000	940	5940	960	4943	972	4701	989	4463	1001	4323	1036	4002	1110	3567	1219	3168
BA (ft^2/ac)	145	12	158	15	132	16	126	17	119	18	116	20	107	23	96	27	85
VOL (ft^3/ac)	5500	943	6443	947	5330	955	5059	967	4791	976	4633	1006	4271	1070	3777	1171	3320
BA (ft^2/ac)	160	11	172	14	142	15	135	16	128	17	124	18	114	21	101	25	89
VOL (ft^3/ac)	6000	952	6952	941	5724	945	5423	953	5127	959	4951	982	4548	1037	3995	1130	3478
BA (ft^2/ac)	174	10	185	13	153	14	145	15	137	15	132	17	122	20	107	24	93
VOL (ft^3/ac)	6500	966	7466	940	6123	940	5794	944	5468	948	5275	965	4831	1011	4218	1094	3643
BA (ft^2/ac)	188	10	198	12	163	13	154	14	146	14	141	16	129	19	113	22	98
VOL (ft^3/ac)	7000	985	7985	944	6527	940	6169	940	5815	942	5604	953	5119	990	4447	1064	3813
BA (ft^2/ac)	203	9	212	11	174	12	164	13	155	13	149	15	137	17	119	21	102
VOL (ft^3/ac)	7500	1006	8506	952	6935	945	6548	940	6165	940	5937	945	5411	973	4681	1038	3987
BA (ft^2/ac)	217	8	226	11	184	11	174	12	164	12	158	14	144	16	125	20	107
VOL (ft^3/ac)	8000	1030	9030	963	7346	952	6930	944	6518	941	6273	941	5707	961	4918	1017	4165
BA (ft^2/ac)	231	8	240	10	195	11	184	11	173	12	167	13	152	15	131	19	111
VOL (ft^3/ac)	8500	1056	9556	976	7759	962	7315	951	6875	946	6612	940	6006	952	5159	999	4347
BA (ft^2/ac)	246	7	254	9	206	10	194	11	183	11	176	12	160	15	138	18	116
VOL (ft^3/ac)	9000	1084	10084	992	8175	974	7703	960	7234	952	6954	942	6307	945	5402	983	4532
BA (ft^2/ac)	260	7	267	9	217	9	205	10	192	10	185	12	168	14	144	17	121
	SITE INDEX 80			PRESENT AGE 50				PRESENT HEIGHT 80.0 FT				HEIGHT IN 5 YEARS 86.1 FT					
VOL (ft^3/ac)	5000	812	5812	829	4812	840	4569	855	4329	866	4187	898	3863	964	3421	1064	3012
BA (ft^2/ac)	133	10	144	12	119	13	113	14	108	14	104	16	96	18	85	22	75
VOL (ft^3/ac)	5500	815	6315	818	5201	825	4929	836	4660	844	4501	870	4136	928	3635	1020	3168
BA (ft^2/ac)	147	9	156	11	129	12	122	13	116	13	112	15	103	17	91	20	79
VOL (ft^3/ac)	6000	823	6823	813	5596	816	5295	823	4997	829	4821	849	4415	898	3856	982	3330
BA (ft^2/ac)	160	8	169	10	139	11	131	12	124	12	120	13	110	16	96	19	83
VOL (ft^3/ac)	6500	836	7336	813	5995	812	5666	816	5340	819	5146	834	4700	875	4082	950	3498
BA (ft^2/ac)	173	8	181	9	148	10	140	11	132	11	128	12	117	15	101	18	87
VOL (ft^3/ac)	7000	852	7852	816	6399	813	6041	812	5687	814	5476	823	4989	856	4313	922	3671
BA (ft^2/ac)	186	7	194	9	158	9	149	10	141	11	136	12	124	14	107	17	91
VOL (ft^3/ac)	7500	871	8371	823	6806	816	6420	813	6037	812	5809	817	5282	842	4549	899	3848
BA (ft^2/ac)	199	7	206	8	168	9	159	9	149	10	144	11	131	13	113	16	96
VOL (ft^3/ac)	8000	892	8892	833	7216	823	6802	816	6390	813	6145	813	5579	830	4788	880	4029
BA (ft^2/ac)	213	6	219	8	178	8	168	9	158	9	152	10	138	12	119	15	100
VOL (ft^3/ac)	8500	915	9415	845	7628	832	7186	822	6746	817	6484	812	5878	822	5029	864	4212
BA (ft^2/ac)	226	6	232	7	188	8	177	8	167	9	160	10	145	12	125	14	105
VOL (ft^3/ac)	9000	939	9939	859	8041	843	7571	830	7104	823	6825	814	6179	817	5274	850	4399
BA (ft^2/ac)	239	5	245	7	198	7	187	8	175	8	169	9	153	11	131	13	109
VOL (ft^3/ac)	9500	965	10465	874	8457	856	7959	840	7464	831	7168	817	6483	813	5521	839	4588
BA (ft^2/ac)	252	5	258	6	209	7	196	7	184	8	177	9	160	10	137	13	114
VOL (ft^3/ac)	10000	993	10993	891	8874	870	8348	851	7825	841	7513	823	6788	812	5769	831	4779
BA (ft^2/ac)	265	5	271	6	219	7	206	7	193	7	185	8	168	10	143	12	119

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 80	PRESENT AGE 55						PRESENT HEIGHT 86.1 FT				HEIGHT IN 5 YEARS 91.9 FT					
VOL (ft^3/ac)	5500	650	6150	639	5022	641	4745	646	4470	650	4307	666	3931	704	3411	770	2919
BA (ft^2/ac)	136	6	142	7	117	8	110	8	104	9	100	10	92	11	80	14	68
VOL (ft^3/ac)	6000	662	6662	640	5423	639	5117	640	4815	643	4634	653	4219	684	3641	742	3091
BA (ft^2/ac)	148	5	154	7	126	7	119	8	112	8	108	9	98	10	85	13	72
VOL (ft^3/ac)	6500	677	7177	644	5827	640	5494	639	5163	639	4966	645	4511	669	3876	719	3268
BA (ft^2/ac)	161	5	166	6	135	7	127	7	120	7	115	8	105	10	90	12	76
VOL (ft^3/ac)	7000	695	7695	652	6235	645	5874	641	5515	639	5301	640	4806	657	4114	700	3449
BA (ft^2/ac)	173	4	178	6	144	6	136	7	128	7	123	8	112	9	96	11	81
VOL (ft^3/ac)	7500	714	8214	662	6644	652	6256	645	5869	642	5639	639	5105	649	4356	684	3633
BA (ft^2/ac)	185	4	190	5	154	6	145	6	136	6	131	7	118	9	101	11	85
VOL (ft^3/ac)	8000	736	8736	673	7056	661	6640	651	6226	647	5978	640	5405	643	4600	672	3820
BA (ft^2/ac)	197	4	202	5	163	5	154	6	144	6	139	7	125	8	107	10	89
VOL (ft^3/ac)	8500	759	9259	687	7470	672	7026	660	6584	654	6320	643	5708	640	4847	662	4010
BA (ft^2/ac)	210	4	214	5	173	5	163	5	152	6	146	6	132	8	113	9	93
VOL (ft^3/ac)	9000	783	9783	702	7885	685	7414	670	6944	662	6664	647	6013	639	5096	654	4202
BA (ft^2/ac)	222	3	226	4	182	5	171	5	161	5	154	6	139	7	118	9	98
VOL (ft^3/ac)	9500	807	10307	718	8301	699	7802	681	7306	672	7009	654	6319	639	5347	648	4396
BA (ft^2/ac)	234	3	238	4	192	4	180	5	169	5	162	6	146	7	124	8	102
VOL (ft^3/ac)	10000	833	10833	735	8718	714	8192	694	7668	683	7355	661	6627	641	5599	643	4592
BA (ft^2/ac)	246	3	250	4	201	4	189	5	177	5	170	5	153	6	130	8	107
VOL (ft^3/ac)	10500	860	11360	753	9136	729	8583	707	8032	695	7702	670	6935	645	5852	641	4789
BA (ft^2/ac)	258	3	262	4	211	4	198	4	186	4	178	5	160	6	136	8	111
VOL (ft^3/ac)	11000	887	11887	772	9555	746	8975	722	8396	708	8050	679	7245	649	6106	639	4988
BA (ft^2/ac)	271	3	274	4	220	4	207	4	194	4	186	5	168	6	141	7	116

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 80	PRESENT AGE 60						PRESENT HEIGHT 91.9 FT						HEIGHT IN 5 YEARS 97.4 FT			
VOL (ft^3/ac)	6000	457	6457	408	5191	398	4876	388	4563	383	4375	374	3940	368	3325	375	2724
BA (ft^2/ac)	139	2	141	2	114	2	107	2	100	3	96	3	87	4	73	4	60
VOL (ft^3/ac)	6500	480	6980	423	5606	411	5264	399	4923	393	4720	380	4246	369	3576	371	2919
BA (ft^2/ac)	150	1	152	2	123	2	115	2	108	2	103	3	93	3	79	4	65
VOL (ft^3/ac)	7000	503	7503	439	6022	425	5653	411	5286	404	5066	388	4554	372	3829	368	3117
BA (ft^2/ac)	162	1	164	2	132	2	124	2	116	2	111	2	100	3	84	4	69
VOL (ft^3/ac)	7500	527	8027	456	6439	440	6044	425	5649	416	5413	397	4863	377	4084	368	3316
BA (ft^2/ac)	173	1	175	2	141	2	132	2	124	2	118	2	107	3	90	4	73
VOL (ft^3/ac)	8000	552	8552	474	6857	456	6435	439	6013	429	5761	407	5173	383	4340	369	3517
BA (ft^2/ac)	185	1	186	1	150	2	141	2	131	2	126	2	113	3	95	3	77
VOL (ft^3/ac)	8500	578	9078	493	7276	473	6826	454	6378	443	6109	418	5484	389	4597	371	3719
BA (ft^2/ac)	196	1	198	1	159	1	149	2	139	2	134	2	120	2	101	3	82
VOL (ft^3/ac)	9000	604	9604	512	7695	490	7219	469	6743	457	6459	430	5796	397	4854	374	3922
BA (ft^2/ac)	208	1	209	1	168	1	158	1	147	2	141	2	127	2	106	3	86
VOL (ft^3/ac)	9500	630	10130	532	8114	508	7612	485	7110	472	6809	443	6108	405	5113	378	4126
BA (ft^2/ac)	219	1	221	1	177	1	166	1	155	1	149	2	134	2	112	3	91
VOL (ft^3/ac)	10000	657	10657	552	8534	526	8005	502	7476	488	7159	455	6421	414	5372	382	4331
BA (ft^2/ac)	231	1	232	1	186	1	175	1	163	1	156	2	140	2	118	3	95
VOL (ft^3/ac)	10500	684	11184	572	8955	545	8399	519	7843	503	7510	469	6735	424	5631	388	4536
BA (ft^2/ac)	242	1	243	1	195	1	183	1	171	1	164	1	147	2	123	2	100
VOL (ft^3/ac)	11000	711	11711	593	9375	564	8793	536	8210	520	7861	483	7048	434	5891	394	4742
BA (ft^2/ac)	254	1	255	1	204	1	192	1	179	1	171	1	154	2	129	2	104
VOL (ft^3/ac)	11500	739	12239	614	9796	583	9187	554	8578	536	8213	497	7362	444	6151	400	4949
BA (ft^2/ac)	265	1	266	1	213	1	200	1	187	1	179	1	161	2	134	2	108
VOL (ft^3/ac)	12000	766	12766	635	10218	603	9581	571	8946	553	8565	511	7677	455	6412	407	5155
BA (ft^2/ac)	277	1	278	1	222	1	209	1	195	1	187	1	167	2	140	2	113

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 85	PRESENT AGE 20						PRESENT HEIGHT 38.3 FT				HEIGHT IN 5 YEARS 47.0 FT					
VOL (ft^3/ac)	**1500**	1355	2855	1431	2614	1455	2559	1482	2506	1500	2476	1544	2410	1618	2325	1705	2253
BA (ft^2/ac)	**87**	44	131	51	121	53	118	55	116	56	114	59	111	64	108	70	104
VOL (ft^3/ac)	**2000**	1292	3292	1340	2923	1359	2838	1381	2755	1396	2708	1436	2602	1507	2464	1597	2346
BA (ft^2/ac)	**114**	36	151	43	134	45	131	47	127	48	125	51	120	57	114	63	109
VOL (ft^3/ac)	**2500**	1277	3777	1293	3276	1305	3158	1320	3044	1330	2977	1362	2827	1424	2631	1510	2459
BA (ft^2/ac)	**142**	31	173	37	150	38	145	40	140	42	137	45	130	50	121	57	114
VOL (ft^3/ac)	**3000**	1295	4295	1277	3660	1281	3509	1287	3362	1293	3275	1314	3080	1363	2821	1441	2590
BA (ft^2/ac)	**169**	26	196	32	168	33	161	35	154	37	150	40	142	45	130	52	120
VOL (ft^3/ac)	**3500**	1334	4834	1284	4067	1279	3882	1277	3701	1278	3595	1288	3354	1322	3029	1387	2736
BA (ft^2/ac)	**197**	23	220	28	186	30	177	31	169	32	165	35	154	41	139	47	126
	SITE INDEX 85	PRESENT AGE 25						PRESENT HEIGHT 47.0 FT				HEIGHT IN 5 YEARS 55.3 FT					
VOL (ft^3/ac)	**2000**	1342	3342	1427	3010	1455	2934	1486	2860	1506	2818	1558	2724	1646	2604	1752	2501
BA (ft^2/ac)	**93**	37	130	43	117	44	115	46	112	47	110	50	107	55	102	61	98
VOL (ft^3/ac)	**2500**	1286	3786	1345	3328	1368	3221	1394	3118	1411	3058	1459	2924	1543	2750	1650	2599
BA (ft^2/ac)	**115**	31	147	37	130	39	126	40	122	42	119	45	114	50	108	55	102
VOL (ft^3/ac)	**3000**	1264	4264	1295	3678	1311	3540	1331	3406	1345	3327	1385	3151	1461	2918	1565	2714
BA (ft^2/ac)	**138**	27	165	32	143	34	138	36	133	37	130	40	123	45	114	51	106
VOL (ft^3/ac)	**3500**	1266	4766	1270	4053	1279	3882	1292	3716	1302	3619	1333	3398	1398	3105	1494	2843
BA (ft^2/ac)	**160**	24	184	29	157	30	151	32	144	33	141	36	132	41	121	47	111
VOL (ft^3/ac)	**4000**	1286	5286	1262	4445	1264	4243	1270	4044	1276	3928	1297	3663	1349	3307	1436	2984
BA (ft^2/ac)	**183**	21	204	26	172	27	164	29	157	30	152	32	142	37	129	43	117
VOL (ft^3/ac)	**4500**	1318	5818	1268	4851	1263	4617	1262	4386	1264	4251	1275	3941	1314	3521	1389	3137
BA (ft^2/ac)	**205**	19	224	23	188	24	179	26	170	27	165	30	153	34	137	40	122
	SITE INDEX 85	PRESENT AGE 30						PRESENT HEIGHT 55.3 FT				HEIGHT IN 5 YEARS 63.3 FT					
VOL (ft^3/ac)	**3000**	1251	4251	1316	3699	1340	3569	1369	3443	1388	3370	1440	3206	1533	2990	1654	2802
BA (ft^2/ac)	**117**	26	144	32	126	33	121	35	117	36	115	39	109	43	102	49	96
VOL (ft^3/ac)	**3500**	1228	4728	1268	4051	1287	3891	1310	3734	1326	3643	1371	3436	1456	3163	1572	2921
BA (ft^2/ac)	**136**	23	160	28	137	29	132	31	127	32	124	35	117	39	108	45	100
VOL (ft^3/ac)	**4000**	1224	5224	1240	4423	1252	4231	1269	4043	1282	3933	1318	3684	1393	3351	1503	3052
BA (ft^2/ac)	**155**	21	176	25	150	27	143	28	137	29	133	32	125	36	114	42	104
VOL (ft^3/ac)	**4500**	1233	5733	1226	4809	1232	4586	1243	4367	1252	4239	1280	3946	1344	3551	1444	3193
BA (ft^2/ac)	**174**	19	193	23	163	24	155	26	148	26	144	29	134	33	121	39	109
VOL (ft^3/ac)	**5000**	1254	6254	1224	5206	1224	4953	1229	4703	1234	4555	1253	4219	1305	3762	1395	3344
BA (ft^2/ac)	**193**	17	211	21	176	22	167	23	159	24	154	27	143	31	128	36	114
VOL (ft^3/ac)	**5500**	1283	6783	1230	5613	1225	5328	1223	5048	1225	4882	1236	4502	1276	3983	1355	3503
BA (ft^2/ac)	**212**	15	228	19	189	20	180	22	171	22	165	25	152	29	135	34	119
VOL (ft^3/ac)	**6000**	1318	7318	1244	6027	1233	5711	1226	5400	1224	5215	1226	4792	1254	4211	1321	3669
BA (ft^2/ac)	**231**	14	246	18	203	19	193	20	182	21	176	23	162	27	143	32	125

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0		20		25		30		33		40		50		60	
		5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld	5-yr grth	5-yr y'ld
	SITE INDEX 85			PRESENT AGE 35				PRESENT HEIGHT 63.3 FT						HEIGHT IN 5 YEARS 70.9 FT			
VOL (ft^3/ac)	3500	1189	4689	1253	4036	1278	3882	1307	3731	1327	3644	1380	3446	1478	3185	1607	2955
BA (ft^2/ac)	119	22	141	27	122	28	117	29	113	30	110	33	105	37	97	42	90
VOL (ft^3/ac)	4000	1169	5169	1211	4394	1231	4209	1254	4029	1271	3923	1318	3683	1407	3364	1531	3079
BA (ft^2/ac)	136	20	156	24	133	25	127	27	122	28	119	30	112	34	102	39	94
VOL (ft^3/ac)	4500	1163	5663	1184	4767	1198	4552	1217	4341	1230	4217	1269	3935	1349	3556	1465	3214
BA (ft^2/ac)	152	18	170	22	144	23	137	24	131	25	127	27	119	31	108	37	98
VOL (ft^3/ac)	5000	1169	6169	1169	5152	1178	4906	1190	4665	1201	4522	1232	4198	1301	3759	1409	3358
BA (ft^2/ac)	169	16	185	20	155	21	148	22	141	23	137	25	127	29	114	34	102
VOL (ft^3/ac)	5500	1183	6683	1163	5546	1167	5270	1174	4998	1181	4838	1205	4470	1263	3970	1362	3510
BA (ft^2/ac)	186	15	201	18	167	19	159	20	151	21	146	23	135	27	120	32	106
VOL (ft^3/ac)	6000	1204	7204	1165	5948	1163	5642	1165	5340	1169	5161	1185	4751	1233	4190	1321	3669
BA (ft^2/ac)	202	14	216	17	179	18	170	19	161	20	156	22	143	25	127	30	111
VOL (ft^3/ac)	6500	1230	7730	1173	6356	1166	6020	1163	5688	1164	5490	1173	5038	1209	4417	1287	3835
BA (ft^2/ac)	219	13	232	16	191	17	181	18	171	18	165	20	152	24	133	28	116
VOL (ft^3/ac)	7000	1260	8260	1186	6769	1174	6403	1166	6041	1164	5826	1166	5331	1192	4649	1258	4006
BA (ft^2/ac)	236	12	248	15	203	15	192	16	182	17	175	19	161	22	140	27	121
VOL (ft^3/ac)	7500	1295	8795	1203	7186	1187	6790	1174	6398	1169	6165	1163	5629	1179	4886	1234	4183
BA (ft^2/ac)	252	11	264	14	216	14	204	15	192	16	185	18	169	21	147	25	126
	SITE INDEX 85			PRESENT AGE 40				PRESENT HEIGHT 70.9 FT						HEIGHT IN 5 YEARS 78.1 FT			
VOL (ft^3/ac)	4000	1098	5098	1155	4338	1178	4156	1205	3979	1224	3876	1275	3641	1372	3329	1502	3050
BA (ft^2/ac)	121	18	139	22	119	23	114	24	109	25	106	27	100	31	92	36	84
VOL (ft^3/ac)	4500	1083	5583	1121	4704	1139	4492	1161	4285	1177	4163	1222	3887	1309	3516	1433	3182
BA (ft^2/ac)	136	16	152	20	129	21	123	22	117	23	114	25	107	29	97	33	88
VOL (ft^3/ac)	5000	1079	6079	1098	5081	1111	4840	1129	4603	1141	4463	1179	4145	1258	3715	1374	3323
BA (ft^2/ac)	151	125	166	18	139	19	132	20	126	21	122	23	114	26	102	31	91
VOL (ft^3/ac)	5500	1084	6584	1085	5468	1093	5197	1106	4930	1116	4772	1147	4412	1215	3922	1323	3471
BA (ft^2/ac)	166	13	179	16	149	17	142	19	135	19	131	21	121	25	108	29	95
VOL (ft^3/ac)	6000	1096	7096	1080	5863	1083	5562	1091	5265	1098	5090	1122	4688	1180	4138	1279	3627
BA (ft^2/ac)	180	12	193	15	160	16	152	17	144	18	139	20	128	23	113	27	100
VOL (ft^3/ac)	6500	1113	7613	1080	6263	1079	5933	1082	5607	1087	5413	1104	4970	1152	4360	1241	3790
BA (ft^2/ac)	195	11	207	14	171	15	162	16	153	17	148	18	136	22	119	26	104
VOL (ft^3/ac)	7000	1135	8135	1086	6669	1081	6309	1079	5954	1081	5742	1091	5257	1130	4587	1209	3957
BA (ft^2/ac)	210	11	221	13	182	14	172	15	162	16	157	17	144	20	126	24	109
VOL (ft^3/ac)	7500	1160	8660	1096	7078	1086	6690	1081	6305	1079	6076	1083	5549	1113	4820	1181	4130
BA (ft^2/ac)	225	10	235	12	193	13	182	14	172	15	166	16	152	19	132	23	113
VOL (ft^3/ac)	8000	1188	9188	1109	7492	1095	7074	1086	6660	1082	6413	1080	5845	1099	5057	1158	4307
BA (ft^2/ac)	240	9	250	12	204	12	193	3	182	14	175	15	160	18	138	22	118
VOL (ft^3/ac)	8500	1219	9719	1125	7908	1108	7461	1094	7018	1088	6754	1079	6145	1090	5297	1139	4488
BA (ft^2/ac)	255	9	264	11	215	12	203	12	191	13	184	14	168	17	145	21	123

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 85	PRESENT AGE 45						PRESENT HEIGHT 78.1 FT						HEIGHT IN 5 YEARS 85.0 FT			
VOL (ft^3/ac)	**5000**	967	5967	992	4975	1006	4735	1025	4499	1038	4359	1076	4042	1154	3611	1269	3218
BA (ft^2/ac)	**137**	12	150	15	125	16	119	17	113	18	110	20	102	123	91	27	81
VOL (ft^3/ac)	**5500**	968	6468	977	5360	987	5090	1001	4825	1011	4668	1043	4309	1112	3819	1219	3367
BA (ft^2/ac)	**150**	11	162	14	135	15	128	16	121	16	117	18	108	21	96	25	85
VOL (ft^3/ac)	**6000**	976	6976	969	5752	974	5453	984	5158	992	4983	1017	4583	1077	4034	1175	3524
BA (ft^2/ac)	**164**	10	175	13	144	14	137	15	130	15	125	17	115	20	102	23	89
VOL (ft^3/ac)	**6500**	988	7488	967	6149	968	5822	973	5498	979	5305	998	4864	1049	4256	1138	3687
BA (ft^2/ac)	**177**	10	187	12	154	13	146	14	138	14	133	16	122	18	107	22	93
VOL (ft^3/ac)	**7000**	1005	8005	969	6552	967	6195	968	5842	971	5632	984	5150	1026	4483	1106	3854
BA (ft^2/ac)	**191**	9	200	11	164	12	155	13	146	13	141	15	129	17	113	21	97
VOL (ft^3/ac)	**7500**	1025	8525	975	6958	969	6573	967	6191	967	5964	975	5441	1008	4715	1078	4027
BA (ft^2/ac)	**204**	8	213	10	174	11	165	12	155	12	150	14	137	16	119	20	101
VOL (ft^3/ac)	**8000**	1048	9048	985	7368	975	6954	969	6543	967	6299	969	5735	993	4951	1055	4204
BA (ft^2/ac)	**218**	8	226	10	184	10	174	11	164	12	158	13	144	15	124	19	106
VOL (ft^3/ac)	**8500**	1073	9573	997	7780	984	7338	974	6898	970	6637	967	6032	983	5190	1035	4384
BA (ft^2/ac)	**231**	7	239	9	195	10	184	11	173	11	166	12	151	14	130	16	110
VOL (ft^3/ac)	**9000**	1100	10100	1012	8195	995	7724	982	7256	976	6977	967	6333	975	5432	1019	4567
BA (ft^2/ac)	**245**	7	252	9	205	9	193	10	182	10	175	12	159	14	136	17	115
VOL (ft^3/ac)	**9500**	1129	10629	1028	8611	1009	8112	992	7616	983	7320	970	6636	970	5677	1005	4754
BA (ft^2/ac)	**258**	7	265	8	215	9	203	9	190	10	183	11	166	13	142	16	119
VOL (ft^3/ac)	**10000**	1159	11159	1047	9030	1024	8502	1004	7978	993	7665	975	6941	967	5924	994	4942
BA (ft^2/ac)	**272**	6	278	8	226	8	212	9	199	9	192	10	174	12	149	15	124
	SITE INDEX 85	PRESENT AGE 50						PRESENT HEIGHT 85.0 FT						HEIGHT IN 5 YEARS 91.5 FT			
VOL (ft^3/ac)	**5500**	819	6319	822	5205	830	4933	840	4665	849	4506	875	4141	934	3641	1026	3175
BA (ft^2/ac)	**138**	8	147	11	121	11	115	12	109	12	105	14	97	16	85	19	75
VOL (ft^3/ac)	**6000**	827	6827	817	5600	820	5299	827	5002	834	4825	854	4420	904	3861	988	3337
BA (ft^2/ac)	**150**	8	159	10	130	10	123	11	117	11	113	13	103	15	90	18	78
VOL (ft^3/ac)	**6500**	839	7339	816	5999	816	5670	820	5344	823	5150	839	4704	880	4087	956	3504
BA (ft^2/ac)	**163**	7	170	9	140	10	132	10	125	11	120	12	110	14	96	17	82
VOL (ft^3/ac)	**7000**	855	7855	820	6402	816	6045	816	5690	818	5480	828	4993	861	4318	928	3677
BA (ft^2/ac)	**175**	7	182	8	149	9	141	10	133	10	128	11	116	13	101	16	86
VOL (ft^3/ac)	**7500**	873	8373	826	6809	820	6423	816	6041	816	5813	821	5286	846	4553	905	3853
BA (ft^2/ac)	**188**	6	194	8	158	8	149	9	141	9	135	10	123	12	106	15	90
VOL (ft^3/ac)	**8000**	894	8894	836	7219	826	6805	819	6394	817	6149	817	5583	835	4792	885	4034
BA (ft^2/ac)	**200**	6	206	7	168	8	158	8	149	9	143	10	130	12	112	14	94
VOL (ft^3/ac)	**8500**	917	9417	847	7630	835	7188	825	6749	821	6487	816	5882	827	5034	869	4217
BA (ft^2/ac)	**212**	5	218	7	177	7	167	8	157	8	151	9	137	11	117	13	99
VOL (ft^3/ac)	**9000**	942	9942	861	8044	846	7574	833	7107	827	6828	817	6183	821	5278	855	4404
BA (ft^2/ac)	**225**	5	230	6	187	7	176	7	165	8	159	9	144	10	123	13	103

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 85	PRESENT AGE 50						PRESENT HEIGHT 85.0 FT						HEIGHT IN 5 YEARS 91.5 FT			
VOL (ft^3/ac)	**9500**	968	10468	877	8459	858	7962	843	7467	834	7171	821	6486	817	5525	844	4593
BA (ft^2/ac)	**237**	5	243	6	196	7	185	7	173	7	167	8	151	10	129	12	107
VOL (ft^3/ac)	**10000**	995	10995	893	8876	872	8351	854	7828	844	7516	826	6792	816	5773	835	4784
BA (ft^2/ac)	**250**	5	255	6	206	6	194	7	182	7	175	8	158	9	134	12	112
VOL (ft^3/ac)	**10500**	1023	11523	912	9294	888	8741	866	8191	855	7862	833	7098	816	6023	828	4977
BA (ft^2/ac)	**262**	4	267	6	216	6	203	6	190	7	183	7	165	9	140	11	116
VOL (ft^3/ac)	**11000**	1052	12052	931	9714	904	9133	880	8555	867	8209	841	7407	818	6275	823	5172
BA (ft^2/ac)	**274**	4	279	5	225	6	212	6	198	6	191	7	172	9	146	11	121
	SITE INDEX 85	PRESENT AGE 55						PRESENT HEIGHT 91.5 FT						HEIGHT IN 5 YEARS 97.7 FT			
VOL (ft^3/ac)	**6000**	636	6636	607	5390	605	5083	604	4778	605	4597	612	4177	636	3593	686	3035
BA (ft^2/ac)	**140**	4	145	6	118	6	111	6	104	7	101	7	91	9	79	11	67
VOL (ft^3/ac)	**6500**	653	7153	614	5797	608	5462	605	5129	604	4931	606	4472	623	3831	666	3214
BA (ft^2/ac)	**151**	4	156	5	126	5	119	6	112	6	108	7	98	8	84	10	71
VOL (ft^3/ac)	**7000**	672	7672	624	6206	615	5844	609	5483	606	5268	604	4770	615	4072	650	3398
BA (ft^2/ac)	**163**	4	167	5	135	5	127	5	120	6	115	6	104	8	89	9	75
VOL (ft^3/ac)	**7500**	693	8193	635	6618	624	6228	615	5839	611	5607	605	5070	609	4316	636	3585
BA (ft^2/ac)	**174**	3	178	4	144	5	136	5	127	5	122	6	111	7	94	9	79
VOL (ft^3/ac)	**8000**	716	8716	648	7031	635	6614	623	6198	617	5949	607	5373	605	4562	626	3775
BA (ft^2/ac)	**186**	3	189	4	153	4	144	5	135	5	130	6	117	7	100	8	83
VOL (ft^3/ac)	**8500**	740	9240	663	7446	647	7001	633	6558	626	6292	612	5678	604	4811	618	3967
BA (ft^2/ac)	**197**	3	201	4	162	4	152	4	143	5	137	5	124	6	105	8	87
VOL (ft^3/ac)	**9000**	764	9764	679	7862	661	7390	645	6919	636	6637	618	5984	604	5062	612	4161
BA (ft^2/ac)	**209**	3	212	4	171	4	161	4	151	4	145	5	130	6	111	7	91
VOL (ft^3/ac)	**9500**	790	10290	697	8280	676	7780	657	7282	647	6984	626	6291	607	5314	608	4357
BA (ft^2/ac)	**220**	3	223	3	180	4	169	4	158	4	152	5	137	6	116	7	95
VOL (ft^3/ac)	**10000**	817	10817	715	8698	692	8171	671	7645	659	7331	635	6600	610	5567	605	4554
BA (ft^2/ac)	**232**	2	235	3	189	3	178	4	166	4	160	4	144	5	121	7	100
VOL (ft^3/ac)	**10500**	844	11344	734	9117	709	8562	685	8010	672	7679	644	6910	615	5822	604	4753
BA (ft^2/ac)	**243**	2	246	3	198	3	186	4	174	4	167	4	150	5	127	6	104
VOL (ft^3/ac)	**11000**	872	11872	754	9536	726	8955	701	8375	686	8028	655	7221	620	6077	604	4953
BA (ft^2/ac)	**255**	2	257	3	207	3	195	3	182	4	175	4	157	5	132	6	108
VOL (ft^3/ac)	**11500**	900	12400	774	9957	745	9348	717	8741	701	8378	667	7532	627	6334	605	5154
BA (ft^2/ac)	**266**	2	269	3	216	3	203	3	190	3	182	4	164	5	138	6	113
VOL (ft^3/ac)	**12000**	929	12929	795	10378	763	9742	733	9108	716	8728	679	7844	634	6591	607	5356
BA (ft^2/ac)	**278**	2	280	3	225	3	212	3	198	3	190	4	171	4	144	6	117

TABLE 10 (continued)

	Stand before thinning	Percent thinning: 0 5-yr grth	0 5-yr y'ld	20 5-yr grth	20 5-yr y'ld	25 5-yr grth	25 5-yr y'ld	30 5-yr grth	30 5-yr y'ld	33 5-yr grth	33 5-yr y'ld	40 5-yr grth	40 5-yr y'ld	50 5-yr grth	50 5-yr y'ld	60 5-yr grth	60 5-yr y'ld
	SITE INDEX 85	PRESENT AGE 60						PRESENT HEIGHT 97.7 FT				HEIGHT IN 5 YEARS 103.5 FT					
VOL (ft^3/ac)	**6500**	417	6917	345	5528	327	5181	310	4835	300	4627	277	4143	247	3454	220	2769
BA (ft^2/ac)	**142**	0	142	0	114	0	107	0	100	0	95	0	86	1	72	1	58
VOL (ft^3/ac)	**7000**	445	7445	366	5949	347	5576	329	5203	317	4979	292	4458	258	3715	227	2976
BA (ft^2/ac)	**152**	0	153	0	122	0	115	0	107	0	103	0	92	0	77	1	62
VOL (ft^3/ac)	**7500**	473	7973	388	6371	368	5971	347	5571	335	5332	307	4773	270	3977	236	3184
BA (ft^2/ac)	**163**	0	164	0	131	0	123	0	115	0	110	0	98	0	82	1	66
VOL (ft^3/ac)	**8000**	501	8501	410	6793	388	6367	366	5940	353	5685	323	5089	282	4239	244	3393
BA (ft^2/ac)	**174**	0	174	0	140	0	131	0	122	0	117	0	105	0	88	1	70
VOL (ft^3/ac)	**8500**	530	9030	433	7215	409	6762	385	6309	371	6038	339	5405	294	4501	253	3601
BA (ft^2/ac)	**185**	0	185	0	148	0	139	0	130	0	124	0	111	0	93	1	75
VOL (ft^3/ac)	**9000**	558	9558	455	7638	430	7158	404	6679	389	6391	355	5720	307	4764	262	3811
BA (ft^2/ac)	**196**	0	196	0	157	0	147	0	137	0	131	0	118	0	98	0	79
VOL (ft^3/ac)	**9500**	587	10087	478	8060	451	7554	424	7048	408	6744	371	6037	320	5027	272	4020
BA (ft^2/ac)	**206**	0	207	0	165	0	155	0	145	0	139	0	124	0	104	0	83
VOL (ft^3/ac)	**10000**	616	10616	500	8483	472	7950	443	7418	426	7098	387	6353	333	5290	281	4230
BA (ft^2/ac)	**217**	0	217	0	174	0	163	0	152	0	146	0	131	0	109	0	87
VOL (ft^3/ac)	**10500**	645	11145	523	8906	493	8346	463	7787	445	7452	404	6670	346	5553	291	4440
BA (ft^2/ac)	**228**	0	228	0	183	0	171	0	160	0	153	0	137	0	114	0	92
VOL (ft^3/ac)	**11000**	674	11674	546	9329	514	8743	483	8157	464	7806	420	6986	360	5817	301	4650
BA (ft^2/ac)	**239**	0	239	0	191	0	179	0	167	0	160	0	144	0	120	0	96
VOL (ft^3/ac)	**11500**	703	12203	569	9752	536	9139	503	8527	483	8160	437	7303	373	6080	312	4860
BA (ft^2/ac)	**249**	0	250	0	200	0	187	0	175	0	167	0	150	0	125	0	100
VOL (ft^3/ac)	**12000**	732	12732	592	10175	557	9536	523	8897	502	8514	454	7620	387	7344	322	5071
BA (ft^2/ac)	**260**	0	261	0	208	0	195	0	182	0	175	0	156	0	130	0	105
VOL (ft^3/ac)	**12500**	761	13261	615	10598	579	9932	543	9267	521	8868	471	7937	401	6608	332	5281
BA (ft^2/ac)	**271**	0	271	0	217	0	203	0	190	0	182	0	163	0	136	0	109
VOL (ft^3/ac)	**13000**	790	13790	638	11021	600	10329	563	9637	540	9222	488	8254	414	6872	343	5492
BA (ft^2/ac)	**282**	0	282	0	226	0	212	0	197	0	189	0	169	0	141	0	113

TABLE 11 Individual tree red pine standard volume table

Dbh.ob (in)	Gross total volume (ft^3)														
	Total height (ft)														
	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85
2	0.19	0.22	0.26	0.29	0.32	0.36	0.39	0.43	0.46	0.49	0.53	0.56	0.60	0.63	0.66
3	0.38	0.50	0.62	0.74	0.86	0.98	1.10	1.22	1.34	1.46	1.58	1.70	1.82	1.94	2.06
4	0.62	0.85	1.08	1.31	1.55	1.78	2.01	2.24	2.47	2.70	2.93	3.16	3.39	3.62	3.85
5	0.91	1.28	1.64	2.01	2.37	2.74	3.10	3.47	3.84	4.20	4.57	4.93	5.30	5.66	6.03
6	1.24	1.77	2.29	2.82	3.34	3.87	4.39	4.92	5.44	5.97	6.49	7.02	7.54	8.07	8.59
7	1.63	2.34	3.04	3.75	4.46	5.17	5.88	6.59	7.29	8.00	8.71	9.42	10.13	10.84	11.55
8	2.06	2.97	3.89	4.80	5.72	6.64	7.55	8.47	9.39	10.30	11.22	12.14	13.05	13.97	14.88
9	2.53	3.68	4.83	5.98	7.13	8.27	9.42	10.57	11.72	12.87	14.02	15.17	16.31	17.46	18.61
10	3.05	4.46	5.86	7.27	8.67	10.08	11.48	12.89	14.30	15.70	17.11	18.51	19.92	21.32	22.73
11	3.62	5.31	7.00	8.68	10.37	12.05	13.74	15.43	17.11	18.80	20.48	22.17	23.86	25.54	27.23
12	4.24	6.23	8.22	10.21	12.21	14.20	16.19	18.18	20.17	22.16	24.15	26.15	28.14	30.13	32.12
13	4.90	7.22	9.55	11.87	14.19	16.51	18.83	21.15	23.47	25.79	28.11	30.43	32.75	35.08	37.40
14	5.61	8.29	10.96	13.64	16.31	18.99	21.66	24.34	27.01	29.69	32.36	35.04	37.71	40.39	43.06
15	6.37	9.43	12.48	15.53	18.58	21.64	24.69	27.74	30.80	33.85	36.90	39.96	43.01	46.06	49.12
16	7.18	10.63	14.09	17.54	21.00	24.46	27.91	31.37	34.82	38.28	41.73	45.19	48.64	52.10	55.56

TABLE 12 Site index for red pine plantations

Age (years)	Stand dominant height (ft) at age 50															
	Present height (ft)															
	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
20	46	53	60	67	73	80	87	94									
22	42	49	55	62	68	75	82	88	95								
24	38	45	51	57	64	70	77	83	89	96							
26	35	41	47	53	60	66	72	78	84	91	97						
28	32	38	44	50	56	62	68	74	80	86	92	98					
30		35	41	47	52	58	64	70	76	82	88	93	99				
32		32	38	44	49	55	61	66	72	78	84	89	95				
34			35	41	46	52	58	63	69	74	80	86	91	97			
36			33	38	44	49	55	60	66	71	77	82	88	93	99		
38			30	36	41	47	52	57	63	68	74	79	84	90	95		
40				34	39	44	49	55	60	65	71	76	81	87	92	97	
42				31	37	42	47	52	58	63	68	73	79	84	89	94	
44					35	40	45	50	55	61	66	71	76	81	87	92	97
46					33	38	43	48	53	59	64	69	74	79	84	89	94
48					31	36	41	46	52	57	62	67	72	77	82	87	92
50						35	40	45	50	55	60	65	70	75	80	85	90
52						33	38	43	48	53	58	63	68	73	78	83	88
54						32	37	42	47	52	57	61	66	71	76	81	86

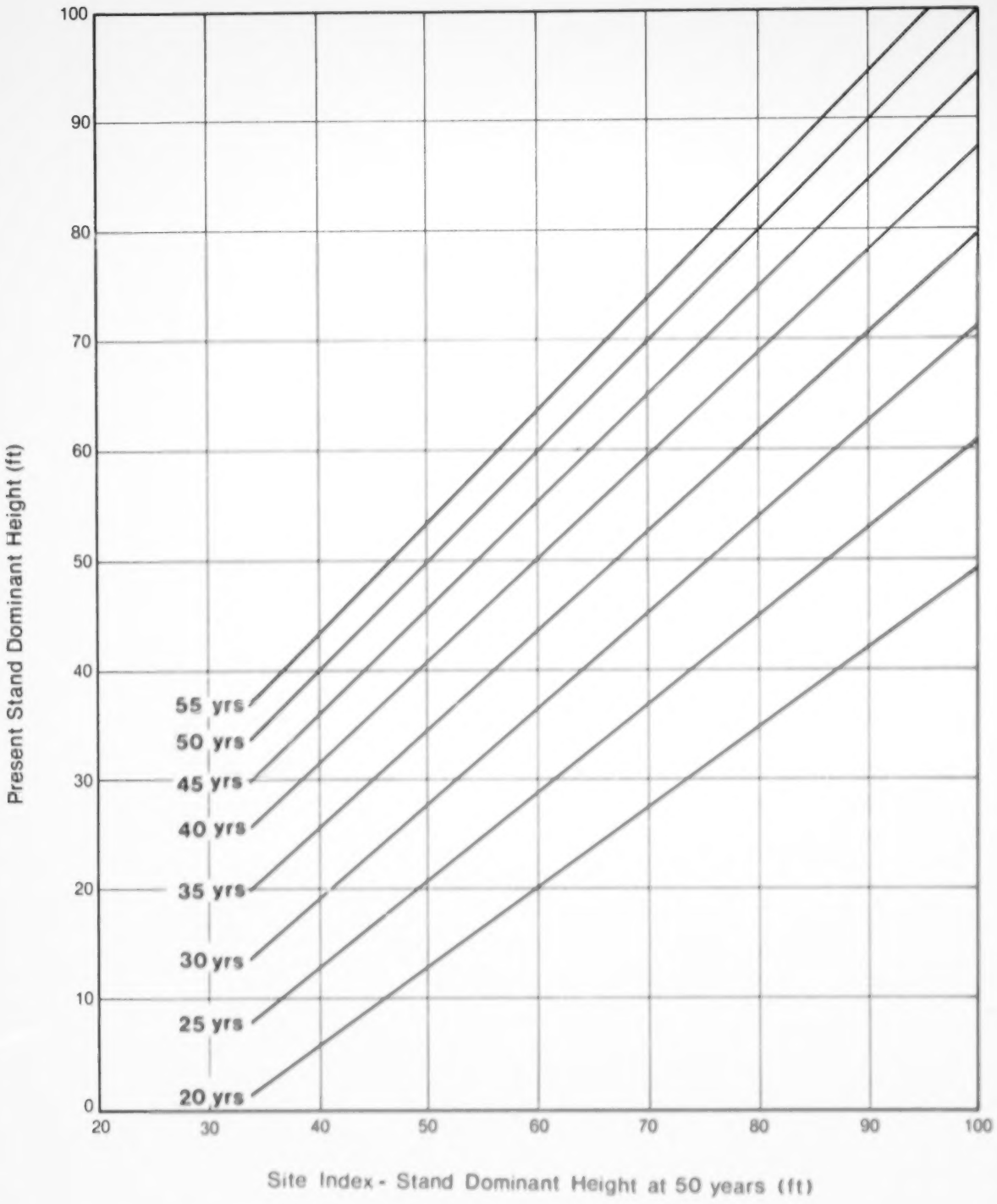

Figure 3 Site index for red pine plantations.

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Rp.
.3k P.R., 90/03/30
ISBN 0-7743-8435-2
ISSN 0301-3924